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CIGIE FAEC Inspectors General Guide to Compliance under the DATA Act

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Summary of Major Changes

Section Number	Section Title	Change
130.01	Scope and Methodology	Updated type of GAGAS engagement to be performed.
130.02	Scope and Methodology	Updated the scope of the audit.
510	Test of Agency's DATA Act Submission	Revised and updated definitions for completeness and timeliness of submission and for completeness, accuracy, timeliness, and quality of data elements.
530, 540, and 550	Test of Agency's DATA Act Submission	Updated guidance to determine completeness and timeliness of the submission.
580.01	Test of Agency's DATA Act Submission	Updated guidance to determine completeness, accuracy and timeliness for each of the data elements.
580.01	Test of Agency's DATA Act Submission	Updated guidance to determine and report the statistical projections for completeness, accuracy and timeliness for the overall data elements tested.
580.07	Test of Agency's DATA Act Submission	Updated guidance to determine and report the results of quality based on the statistical sample performed.
600	Federal Shared Service Providers	Updated guidance to include audit procedures for Federal Shared Service Provider customer agencies.
700.01	Reporting	Updated guidance for what Inspector General reports should contain.

100 INTRODUCTION

- .01 This Inspectors General (IG) Guide to Compliance under the Digital Accountability and Transparency Act of 2014¹ (DATA Act) presents a common methodological and reporting approach for the IG community to use in performing its mandated work. The DATA Act was enacted May 9, 2014, to expand the reporting requirements pursuant to the Federal Funding Accountability and Transparency Act of 2006 (FFATA)². To meet the needs of the IG community, the Council of the Inspectors General on Integrity and Efficiency (CIGIE) Federal Audit Executive Council (FAEC) established the DATA Act Working Group (Working Group). The Working Group's mission is to assist the IG community in understanding and meeting its DATA Act oversight requirements by (1) serving as a working-level liaison with the Department of the Treasury (Treasury), (2) consulting with the Government Accountability Office (GAO), (3) developing a common approach and methodology, and (4) coordinating key communications with other stakeholders. The Working Group consists of nearly 226 auditors representing 53 IGs.
- .02 Each Federal agency presents a unique set of implementation methodologies, challenges, and risks. This guide is intended to provide the IG community with a baseline framework for the audits required by the DATA Act. As such, the audit team, to the extent possible, should adhere to the overall methodology, objectives, and audit procedures outlined in this guide. The audit team should not hesitate to modify this guide based on specific systems and controls in place at its agency but must use professional judgment when designing alternative audit procedures. It is strongly recommended that audit teams document the reason for any deviation from the guide in the audit documentation. This guide may be updated based on feedback from the IG community after its issuance.

110 BACKGROUND

- .01 The DATA Act, in part, requires Federal agencies to report financial and award data in accordance with the established Government-wide financial data standards. In May 2015, the Office of Management and Budget (OMB) and Treasury published 57 data definition standards (commonly referred to as data elements) and required Federal agencies to report financial and award data in accordance with these standards for DATA Act reporting, in January 2017. Subsequently, and in accordance with the DATA Act, Treasury began displaying Federal agencies' data on USASpending.gov for taxpayers and policy makers in May 2017.

¹ Public Law 113-101 (May 9, 2014)

² Public Law 109-282 (September 26, 2006)

- .02 The DATA Act also requires the IG of each Federal agency to audit a statistically valid sample of the spending data submitted by its Federal agency and to submit to Congress a publicly available report assessing the completeness, timeliness, quality, and accuracy of the data sampled; and the implementation and use of the Government-wide financial data standards by the Federal agency.
- .03 As written in the DATA Act, the first set of IG reports were due to Congress in November 2016. However, Federal agencies were not required to display spending data in compliance with the DATA Act until May 2017. As a result, IGs were not able to report on the spending data submitted under the DATA Act, as the information did not exist until 2017. For this reason, CIGIE developed an approach to address the reporting date anomaly. Specifically, the IGs provided Congress with the first required reports in November 2017, one year later than the due date in the statute, with subsequent reports due on a 2-year cycle, in November 2019 and November 2021. The letter memorializing this strategy can be found in Appendix 1.
- .04 During the 2017 testing and reporting period, IGs employed varying methods for meeting the requirements set forth in the DATA Act. For example, the data the IGs used to select and review sample transactions varied based on data availability and the type of engagement performed by the respective IGs. Comparing and compiling the information from all IG reports was difficult for stakeholders. Of the IG reports reviewed by GAO; approximately 72 percent of IGs did not find agency data to be complete, timely, accurate, or of quality. In addition, during 2017, IGs identified government-wide issues with Treasury’s DATA Act Broker, which impacted the testing results of the IGs. IGs, GAO, OMB, Treasury, agencies and Congress found many lessons to be learned following the 2017 engagements. The Working Group compiled a listing of these lessons learned and came together to make revisions to this guide to address those concerns and to ensure future IG audits are comparable, useful, and meet the requirements of the DATA Act. In consultation with GAO, as required by the DATA Act, the Working Group developed this guide to set a baseline framework for the required reviews performed by the IG community and to foster a common methodology for performing these mandates. This guide was updated for the second required report, due November 8, 2019 and may again be updated for the subsequent report due November 2021 based on feedback from the IG community, GAO, and other stakeholders.

120 OBJECTIVES

- .01 The objectives of this audit are to assess the (1) completeness, accuracy, timeliness, and quality of the financial and award data submitted for publication on USASpending.gov and (2) Federal agency’s implementation and use of the Government-wide financial data standards established by OMB and Treasury.

130 SCOPE AND METHODOLOGY

- .01 The Working Group, in consultation with GAO, agrees that the type of engagement to be performed to satisfy the reporting requirements under the DATA Act is a

performance audit in accordance with the requirements of Generally Accepted Government Auditing Standards (GAGAS).

- .02 The scope of this audit will be fiscal year 2019, first quarter financial and award data the Federal agency submitted for publication on USASpending.gov, and any applicable procedures, certifications, documentation, and controls to achieve this process.
- .03 To accomplish the objectives, the audit team should:
- obtain an understanding of any regulatory criteria related to its agency's responsibilities to report financial and award data under the DATA Act (Appendix 2 contains a list of suggested criteria to review) ;
 - review its agency's data quality plan (DQP)³ ;
 - assess the internal and information system controls in place as they relate to the extraction of data from the source systems and the reporting of data to Treasury's DATA Act Broker, in order to assess audit risk and design audit procedures;⁴
 - review and reconcile the fiscal year 2019, first quarter summary-level data submitted by the agency for publication on USASpending.gov;
 - review a statistically valid sample from fiscal year 2019, first quarter financial and award data submitted by the agency for publication on USASpending.gov;
 - assess the completeness, accuracy, timeliness, and quality of the financial and award data sampled; and
 - assess its agency's implementation and use of the 57 data elements/standards established by OMB and Treasury.
- .04 The procedures provided herein are designed to foster a consistent methodology and reporting approach across the IG community, not restrict an auditor from pursuing issues or concerns related to the implementation of the DATA Act. If additional areas of concern are identified, the auditor should proceed according to his or her professional judgment. The audit team must adequately plan and document the planning of the work necessary to address the audit objectives in accordance with GAGAS. For example, auditors should assess audit risk and significance within the context of the audit objectives by gaining an understanding of provisions of laws and regulations, such as the

³ OMB M-18-16, "Appendix A to OMB Circular No. A-123, *Management of Reporting and Data Integrity Risk*," requires DATA Act reporting agencies to implement a DQP effective fiscal year 2019 through fiscal year 2021 at a minimum.

⁴ OMB Circular A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control* (July 15, 2016) and Appendix A to OMB Circular A-123, *Management of Reporting and Data Integrity Risk* (June 6, 2018)

DATA Act, contracts and grant agreements, potential fraud, and abuse that are significant within the context of the audit objectives.⁵ Based on that risk assessment, the auditors should design and perform procedures to obtain reasonable assurance of detecting instances of noncompliance with provisions of laws, regulations, contracts, or grant agreements that are significant within the context of the audit objectives.⁶

200 PLANNING

- .01 In planning this audit, the audit team should gain and document an understanding of regulatory criteria; the agency's DQP, if available; the systems, processes, and internal and information system controls that its agency put in place to facilitate reporting financial and award data in accordance with the requirements of the DATA Act.
- .02 As available, audit teams should leverage the understanding gained during the performance of the 2016 DATA Act readiness and 2017 DATA Act required reviews, and any subsequent reviews performed by the IG to plan the current audit, while keeping in mind its agency's implementation efforts may have evolved over time. Audit teams should also develop and perform procedures to follow up on prior year findings, recommendations, and corrective actions. The 2017 IG audits of the DATA Act identified certain Government-wide broker errors that were beyond the agencies' control. The audit team should discuss these issues with agency management to determine whether the issues have been resolved and whether concerns remain.⁷
- .03 Audit teams should consider the results of any attestation engagements, performance audits, or other studies that directly relate to the objectives of the audit, including whether related recommendations have been implemented.
- .04 Audit teams should evaluate whether to use the work of other auditors to address some of the audit objectives.
- .05 Audit teams should gain an understanding of the following:
 - Applicable laws, legislation, directives, and any other regulatory criteria and guidance related to the agency's responsibilities to report financial and award data under the DATA Act (Appendix 2)

⁵ *Government Auditing Standards*, GAO-12-331G (Washington, D.C.) (GAGAS) Chapter 6, par. 6.11.d.

⁶ GAGAS Chapter 6, par. 6.28.

⁷ Government-wide DATA Act Broker errors included issues with the following procurement award elements (1) Current Total Value of Award and Potential Total Value of Award for Procurement Award Modifications and (2) Indefinite Delivery Vehicle (IDV) Type Errors. Government-wide DATA Act Broker errors included issues with the following financial assistance award elements: Legal Entity City Code and Primary Place of Performance County Name Errors.

- Treasury’s DATA Act Implementation Playbook version 2.0⁸
- DATA Act Information Model Schema (DAIMS) version 1.3 (or current version of the DAIMS at the time of agency submission).⁹ The data files included in the DAIMS are:
 - File A: Appropriations Account,
 - File B: Object Class and Program Activity,
 - File C: Award Financial,
 - File D1: Award (Procurement),
 - File D2: Award (Financial Assistance),
 - File E: Additional Awardee Attributes, and
 - File F: Sub-Award Attributes.
- The agency’s financial and award information and environment, such as the:
 - roles, responsibilities, and reporting relationships of the Federal agency, and its major components and/or bureaus;
 - roles, responsibilities, and reporting relationships with all Federal Shared Service Providers used by the agency and its major reporting components and/or bureaus;
 - source systems for all financial and award data reported under the DATA Act;
 - the impact of sensitive or classified information on these source systems;
 - controls over these source systems, the nature and extent of control testing performed over the source systems, and the results of that testing; and
 - processes, systems, and controls the agency has in place to manage and report financial and award data under the DATA Act.
- Files A, B, and C are submitted by Federal agencies from their internal financial system(s). Files A and B are summary-level financial data. File C is reportable record-level data. Files D1 through F contain detailed information for record level transactions reported in File C. Files D1 through F are submitted by external award reporting systems to Treasury’s DATA Act Broker. The Senior Accountable Official (SAO)¹⁰, or designee, for each Federal agency is required to certify these seven data files for its agency’s financial and award data to be published on USASpending.gov. The DATA Act Information Flow Diagram is shown in Appendix 3. Appendix 4,

⁸ Treasury’s DATA Act Implementation Playbook version 2.0 was issued in June 2016.

⁹ The DAIMS v 1.3 depicts how Federal dollars are spent. It includes, in part, technical guidance describing the submission file formats Federal agencies are required to follow.

¹⁰ SAOs are high-level senior officials or their designees who are accountable for the quality and objectivity of Federal spending information. These senior leaders should ensure that the information conforms to OMB guidance on information quality and adequate systems and processes are in place within the agencies to promote such conformity. However, SAOs are not responsible for certifying the quality of data reported by awardees to GSA and made available on USASpending.gov.

Mapping of Data Elements, details the 57 data elements to be included in testing and where, within Files A through D2, you can find those data elements.

- File E and F data remains the responsibility of the awardee in accordance with terms and conditions of Federal agreements. It is optional for IGs to assess Files E and F as the quality of this data is the legal responsibility of the recipient and agencies are not responsible for certifying the quality of data reported by awardees.¹¹ Agencies are responsible for assuring controls are in place to verify that awardees register in the System for Award Management (SAM) at the time of the financial assistance award. (See section 300)
- .06 Performing this audit may require techniques or methods that require a specialist. Specialists include, but are not limited to, statisticians and information technology experts. If auditors intend to use the work of specialists, in accordance with GAGAS, they should assess the specialists' professional qualifications and independence. IGs should also follow their internal guidance for using the work of internal specialists when evaluating qualifications and independence.

300 ASSESSMENT OF INTERNAL CONTROLS

- .01 The audit team should obtain an understanding of the design of internal and information system controls as it relates to the extraction of data from the source systems and the reporting of data to the DATA Act Broker. Management, not the audit team, is responsible for the design, implementation, and operating effectiveness of the agency's controls. In assessing its agency's controls, the audit team should consult GAO's Standards for Internal Control in the Federal Government¹² and document their understanding gained of the five components of internal control (control environment, risk assessment, control activities, information and communication, and monitoring) and 17 related principles. The audit team should assess whether internal and information system controls as it relates to the extraction of data from the source systems and the reporting of data to the DATA Act Broker have been properly designed and implemented, and are operating effectively to allow the audit team to assess audit risk and design audit procedures.
- .02 Auditors may obtain an understanding of internal control through inquiries, observations/walkthroughs, inspection of documents and records, review of other auditors' work, or direct tests. The work performed to assess the design and

¹¹ OMB Circular A-123, Appendix A, *Management of Reporting and Data Integrity Risk*

¹² GAO-14-704G, *Standards for Internal Control in the Federal Government*, (September 10, 2014)

implementation, and operating effectiveness of internal controls should be documented.

- .03 On June 6, 2018, OMB issued new guidance that took effect immediately, and requires agencies to develop a DQP to achieve the objectives of the DATA Act. The DQP must consider incremental risks to data quality in Federal spending data and any controls that would manage such risks in accordance with OMB Circular No. A-123. Once developed by the agency, quarterly certifications of data submitted by SAOs, or the designee should be based on the consideration of the DQP and the internal controls documented by the agency.
- .04 The audit team should:
- Review any short-term and long-term implementation plans related to the development of the agency's DQP.
 - Determine whether the agency developed a timeline/milestone for developing the DQP.
 - Evaluate whether the roles and responsibilities for developing the plan are clearly defined (organizational structure).
 - Determine whether the DQP was considered during the fiscal year 2019 quarterly SAO certifications. If the DQP was considered, obtain and review documentation of discussions or considerations of the DQP during the certification process.
 - Determine whether the DQP documents the organizational structure and key processes to provide internal controls over financial and award data reporting.
 - Determine whether the DQP documents a testing plan and identification of high-risk reported data.
 - Determine the agency's process for identifying and assessing risks related to spending data. For example, does the DQP detail processes in place that govern the annual verification and validation of procurement data in accordance with the Federal Acquisition Regulation (FAR) Section 4.6 and the use of that information to assess the risk of spending data.
 - Determine whether the DQP identifies risk of misreported data, the impact of the risk, and how and when those risks identified will be addressed.
- .05 While assessing controls, the audit team should also consider the agency's Enterprise Risk Management (ERM) risk profile, if one exists; and document whether the agency identified any risks associated with the controls over the DATA Act source systems and reporting. The audit team should determine and document whether the SAO, or designee, has provided quarterly assurance that its agency's internal controls support the reliability and validity of the agency's summary level and record-level data reported for publication on USASpending.gov.
- .06 OMB's M-17-04 and Management Procedures Memorandum (MPM) 2016-03 specify that management's assurance should leverage data quality and management controls

established in statute, regulation, and Federal wide policy and be aligned with the internal control and risk management strategies in OMB Circular No. A-123. Examples of management controls established in statute include:

- The Federal Managers' Financial Integrity Act of 1982 (FMFIA),¹³ requires that the head of each executive branch agency prepare a statement annually on whether the agency's systems of internal accounting and administrative controls comply with the requirements of FMFIA. If the operations and systems do not comply, the head of the agency will prepare a report to identify any material weaknesses in the agency's system of internal accounting and administrative control and describes the plans and schedule for correcting such weaknesses. The audit team should document its consideration of this report when determining its level of reliance on source systems, especially any agency that reported weaknesses in internal controls over operations and financial reporting and conformance with financial management systems requirements.¹⁴
 - The Federal Financial Management Improvement Act of 1996 (FFMIA)¹⁵ advances Federal financial management by ensuring that Federal financial management systems of agencies covered by the Chief Financial Officers Act¹⁶ provide accurate, reliable, and timely financial management information to the government's managers. Compliance with the FFMIA will provide the basis for the continuing use of reliable financial management information by program managers, the President, Congress, and the public. The audit team should document its consideration of their agency's financial management systems compliance with FFMIA requirements.
- .07 Depending on the nature of the work performed, the audit team may also rely on internal control and substantive testing performed by other auditors related to its agency, e.g. financial statement audits.¹⁷ If other auditors performed internal control testing, the audit team should consult GAGAS when devising its approach to rely on the work of others¹⁸ and document its determination of whether testing is sufficient in scope and the tests performed achieve the objectives of this DATA Act audit. The nature

¹³ Public Law 97-255 (September 8, 1982)

¹⁴ Public Law 97-255, FMFIA Sections 2 and 4 (September 8, 1982)

¹⁵ Public Law 104-208 (September 30, 1996)

¹⁶ Public Law 101-576 (November 15, 1990)

¹⁷ The audit team should note that financial statement audits will not likely test all applicable data elements reported under the DATA Act (e.g., award or non-financial data elements). As such, the audit team should also determine whether the scope, materiality, and precision of the financial statement audit are appropriate to rely upon in the context of the DATA Act audit.

¹⁸ GAO-12-331G, *Government Auditing Standards*, Paragraphs 3.107, 5.17, and 6.40-6.44, (December 2011)

and extent of evidence needed will depend on the significance of the other auditor's work to the current objectives and the extent to which the audit team will use that work.

- .08 Audit teams should consider work performed by IGs related to their Federal Shared Service Provider internal controls and agency complimentary controls as it relates to the extraction of data from their source systems, reporting of data to the DATA Act Broker or transmittal of data to their customer for them to report to the DATA Act Broker. See section 600.
- .09 The audit team should obtain, from the SAO, or the designee, its agency's certification, validation, reconciliation reports, and any other relevant supporting documentation used in providing assurance over its quarterly data submission.¹⁹ The audit team should document its review of the agency's process for reconciling and validating its DATA Act submission. The audit team should also review its agency's supporting documentation to determine and document whether it identifies any deficiencies in internal control or other limitations that would prevent the SAO from certifying that the data submitted for publication on USASpending.gov are complete, accurate, timely, of quality, and comply with the established Government-wide financial and award data standards.
- .010 Consistent with terms and conditions of Federal awards, entities receiving Federal awards are required by 2 C.F.R. Part 25 and the FAR to submit accurate data to SAM and the FFATA Subaward Reporting System (FSRS) maintained by the General Services Administration (GSA). The quality of this data is the legal responsibility of the recipient. GSA provides an assurance statement that the systems are maintained appropriately and can therefore be used for public reporting. Agencies are responsible for assuring controls are in place to verify current recipient registration in SAM at the time of the financial assistance award. Pursuant to 2 C.F.R. Part 200.513, agencies are responsible for resolving audit findings which may indicate if recipients are not complying with their requirements to register or report subawards. Audit teams should determine what processes the agency performs to comply with this requirement from OMB Circular No. A-123, Appendix A.
- .011 The audit team should determine the extent to which the internal controls of information systems and processes related to the DATA Act can be relied upon. The audit team must exercise professional judgment in considering the reliability of financial and award data in relevant information systems when determining the source of support for testing individual attributes in the agency's DATA Act submission in section

¹⁹ OMB's MPM 2016-03 requires the Federal agency SAOs to (1) provide assurance over the information reported to USASpending.gov; (2) leverage data quality and management controls established in statute, regulation, and Government-wide policies; and (3) align their assurance with internal control and risk management strategies described in OMB's Circular A-123.

500, as well as the design of alternate procedures and the impact on reporting of DATA Act results.

400 IMPLEMENTATION AND USE OF THE DATA STANDARDS

- .01 Audit teams should review the agency's data inventory/mapping for Files A, B, C, D1, and D2 to ensure that the standardized data elements and OMB and Treasury definitions per the DAIMS are used across agency business processes, systems, and applications; identify the appropriate source systems where the data resides; and identify gaps. If gaps were identified by the agency, determine whether viable corrective actions/solutions have been identified for all material gaps. Determine the potential impact of the gap on the timeliness or effectiveness of the agency's implementation of the data standards.
- .02 When assessing its agency's use of the data standards, the audit team should determine whether the agency has consistently used the OMB and Treasury established data elements per its inventory/mapping for the agency's submission of Files A, B, and C. Consider the results of detailed test work in Section 500 when finalizing the IG's determination of the agency's use of data standards.

500 TEST OF AGENCY'S DATA ACT SUBMISSION

- .01 This section addresses testing considerations for the following items related to the agency's DATA Act submission to include Files A through D1/D2²⁰:
 - Review the Agency's Certification and Submission process
 - Determine the Timeliness of Agency Submission
 - Determine Completeness of Summary Level Data for Files A and B
 - Determine Whether File C is Complete and Suitable for Sampling
 - Select a Statistically Valid Sample of Certified Spending Data Submitted
 - Test Detailed Record-Level Linkages for Files C and D1/D2
 - Test Detailed Record-Level Data Elements for Files C and D1/D2 for Completeness, Timeliness, Accuracy, and Quality
 - Analyze Results

²⁰ Reference to File D1/D2 includes both Files D1 and D2 as applicable, for procurement and financial assistance awards, respectively.

510 DEFINITIONS

.01 Completeness of Agency Submission

Transactions and events that should have been recorded are recorded in the proper period.

.02 Timeliness of Agency Submission

Reporting of the agency DATA Act submission to the DATA Act Broker is in accordance with the schedule established by the Treasury DATA Act Project Management Office (PMO). The reporting submission dates can be found at <https://www.fiscal.treasury.gov/data-transparency/resources.html> under “Updates”.

.03 Completeness of Data Elements

For each of the required data elements that should have been reported, the data element was reported in the appropriate Files A through D2.

.04 Accuracy of Data Elements

Amounts and other data relating to recorded transactions have been recorded in accordance with the DAIMS, Reporting Submission Specification (RSS), Interface Definition Document (IDD), and the online data dictionary, and agree with the authoritative source records.

.05 Timeliness of Data Elements

For each of the required data elements that should have been reported, the data elements were reported in accordance with the reporting schedules defined by the financial, procurement and financial assistance requirements (FFATA, FAR, Federal Procurement Data System – Next Generation (FPDS-NG), Financial Assistance Broker Submission (FABS) and DAIMS). See section 580.04

.06 Quality of Data Elements

Data that is complete, accurate, and reported on a timely basis.

520 REVIEW THE AGENCY’S CERTIFICATION AND SUBMISSION PROCESS

- .01 The audit team should coordinate with its agency SAO, or the designee, to obtain read-only access to Treasury’s DATA Act Broker. Obtaining a read-only account to Treasury’s DATA Act Broker is preferred to using USASpending.gov’s website to obtain the agency’s submission. The Treasury DATA Act Broker will provide access to additional details such as the submission history data files, and warning files which might be helpful to the audit team to gain a full understanding of the agency’s submission process.

From Treasury’s DATA Act Broker, the audit team should obtain its agency’s:

- fiscal year 2019, first quarter data submission for Files A through F;
- final warning reports; and

- final SAO or designee assurance/certification statement over quarterly agency submission for publication on USASpending.gov.
- .02 The audit team should review final warning or validation reports, reconciliation reports, and any other relevant supporting documentation from external award reporting systems used to report the data in Files D1 and D2 and determine the impact on the data submission.
- .03 The audit team should review and assess the final SAO assurance/certification statement for the fiscal year 2019, first quarter data submission to determine whether the agency identified any data quality issues that should be considered as part of the audit work.
- .04 The audit team should obtain documentation from the agency to support the agency's reconciliations of the linkages between the various files in the submission; Broker warning remediation attempts; the SF-133, *Report on Budget Execution and Budgetary Resources*²¹ for the reporting period; and additional supporting documentation to support the completeness and timeliness of the agency submission.
- .05 The audit team should assess the reasonableness of management's corrective actions and/or management's explanatory text included with the certification as it relates to the agency's submission. Audit teams should document this assessment for each of the following procedures.
- Determine whether the agency has concerns with the completeness, accuracy, timeliness, or quality of the data submitted.
 - Review the agency's reconciliation and processes for correcting errors or omissions in the quarterly data submission.
 - Understand the agency's process for addressing warnings during the agency's submission of files to Treasury's DATA Act Broker. The audit team should assess whether the agency takes action to determine if the warnings may be indicative of an error in the submission or if the warning represents a false-positive indicating that an error does not exist in the file. The audit team should request supporting documentation for the agency's review of the warning files and assess the reasonableness of management's actions to address the warnings.
 - Understand the agency's process for determining the linkages among Files A through F are valid and reliable. SAOs, or designees are required to attest to the validity and reliability of the complete DATA Act submission including linkages across all the data in Files A through F. SAOs or designees should document any

²¹ The SF-133 is a quarterly report that contains information on the sources of budget authority and the status of budgetary resources by individual fund or appropriation.

discrepancies between the files. To provide assurance, agencies should have internal controls in place over all data submitted for publication on USASpending.gov.

- Understand the agency's process for determining that the data submitted in Files A through F are valid and reliable. The SAO or designee should confirm that internal controls over data quality mechanisms are designed, implemented, and operating effectively for the data submitted in Files A through F. Existing data controls established in statute, regulation, and Federal-wide guidance described above in Section 300 should be considered by the SAO or designee when certifying the DATA Act submission.

530 DETERMINE TIMELINESS OF AGENCY SUBMISSION

- .01 The agency submission is considered timely when the submission by the Agency to the DATA Act Broker is in accordance with the reporting schedule established by the Treasury DATA Act PMO (see Section 510.02). The audit team should determine the timeliness of the agency submission by verifying the date of the certification of the submission in the Treasury DATA Act Broker is within the established timeframe determined by the Treasury DATA Act PMO, traditionally within 45 days of quarter end. Due to the government shutdown furlough between December 22, 2018 and January 25, 2019, the due date for agency submissions for fiscal year 2019, first quarter is March 20, 2019. Specific extensions granted to a particular agency by OMB or the Treasury DATA Act PMO should be supported by documentation from OMB or the Treasury DATA Act PMO to the agency.

540 DETERMINE COMPLETENESS OF SUMMARY-LEVEL DATA FOR FILES A AND B

- .01 Completeness of the agency submission is defined as transactions and events that should have been recorded are recorded in the proper period. The audit team should determine the completeness of Files A and B in order to report on the completeness of the agency submission.
- .02 File A includes fiscal year cumulative Federal appropriations account summary-level data. To assess the completeness of File A, determine whether File A includes all Treasury Account Symbols (TAS) from which funds are obligated (as reflected in the Government-wide Treasury Account Symbol (GTAS) SF-133), except for Loan Financing Accounts. To assess the accuracy of File A, select all summary-level data from File A and match the following elements to the agency's GTAS SF-133: agency identifier; beginning period of availability, ending period of availability; main account code; sub account code; budget authority appropriated amount; gross outlay amount by TAS; unobligated balance; other budgetary resources amount; and obligations incurred by TAS. Any variances identified by the auditors between File A and the agency's GTAS SF-133 should be clearly explained and documented by the Federal agency. The audit team should assess the reasonableness of the agency's explanation and resolution of all variances and report on any unusual or unexplained variances it identifies.

- .03 File B includes fiscal year cumulative Federal object class and program activity summary-level data. To assess the completeness of File B, the audit team should compare the data in File B to the TASs listed in File A (if File A is complete) and determine if all TASs in File A are accounted for in File B.²² In addition, verify that the totals of File A and B are equal. Any variances identified by the auditors between Files A and B should be clearly explained and documented by the Federal agency. The audit team should assess the reasonableness of the agency's explanation and resolution of all variances and report on any unusual or unexplained variances it identifies.
- .04 Verify that all object class codes from File B match the codes defined in Section 83 of OMB Circular A-11²³. Verify that all program activity names and codes from File B match the names and codes defined in the Detailed Budget Estimates by Agency Appendix in the President's Budget (Program and Financing Schedule)²⁴. Engagement teams should be aware that OMB created a MAX Collect exercise for agencies to use, on an ongoing basis, to provide the Department of the Treasury with a regularly updated list of program activities. Any variances identified between File B and Section 83 of OMB Circular A-11 and the Program & Financing Schedule or the Max Collect exercise, should be clearly explained and documented by the Federal agency. The audit team should assess the reasonableness of the agency's explanation and resolution of all variances and report on any unusual or unexplained variances it identifies.
- .05 Inquire if summary-level data includes intragovernmental transactions (IGT). In circumstances where awards are made using funds from IGTs, the awarding agency will continue to report award-level information (Files D1 and D2) under FFATA and the Federal Acquisition Regulation, however, the responsibility for reporting financial information (Files A-C) depends on the type of IGT being reported. Review OMB's M-17-04 for additional guidance on IGTs. Any variances with reporting IGTs should be clearly documented by the Federal agency. The engagement team should assess the reasonableness of the agency's process to resolve all variances and report on any unusual or unexplained variances it identifies.

²² If there are no obligations or outlays on a TAS, which is not unusual (especially with a brand-new TAS), agencies would submit the TAS in File B with zeroes for the financial-related information. For such TAS, 0000/unknown can be reported for program activity and object class; there are no programs or object classes to associate with these TAS since there are no obligations on them.

²³ OMB A-11, Preparation, Submission, and Execution of the Budget (July 1, 2016); section 83 of OMB A-11 can be found at https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/a11_current_year/s83.pdf

²⁴ The Program and Financing Schedule can be found at <https://portal.max.gov/portal/document/SF133/Budget/FACTS%20II%20-%20Budget%20Program%20and%20Financing%20Schedule.html>

550 DETERMINE WHETHER FILE C IS COMPLETE AND SUITABLE FOR SAMPLING

- .01 The audit team should determine the completeness of File C in order to report on the completeness of the agency submission and to determine if File C is suitable for selecting a statistically valid sample²⁵. File C, for fiscal year 2019, first quarter, will only include obligation amounts for each award made and/or modified during that reporting quarter (October 1, 2018 – December 31, 2018).
- .02 If the agency submitted File C, the audit team should determine whether file C included any agency data and if so, assess the sufficiency of the agency’s method of determining File C is complete and contains all transactions and linkages that should be included, as well as the agency’s methodology for resolving broker warnings between Files C and D1/D2. It is important that the auditor documents the agency’s process to ensure File C is complete and broker warnings related to File C have been addressed. The audit team should assess the reasonableness of the agency’s process to resolve all variances and report on any unusual or unexplained variances.
- .03 File C links to File B through the TAS, object class, and program activity data elements²⁶. The audit team should assess this linkage by tracing these elements from File C to File B to ensure they exist in File B.
- .04 File C links to Files D1/D2 by the Award Identification (Award ID) Number. The audit team should assess this linkage between the File C and D1/D2 by ensuring that all Award ID Numbers that exist in File C, exist in File D1/D2 and vice versa. Note that there are several situations where an award could validly exist in File C but not File D1/D2 or vice versa. For example:
 - Awards under the micro-purchase transaction (MPT) threshold are not required to be reported in File C under the DATA Act, nor are they required to be entered into FPDS-NG pursuant to the FAR. However, DAIMS v1.3 Practices and Procedures allows the inclusion of MPTs in File C, even though they are not required to be reported. Some agencies may choose to forgo removing MPT transactions from the financial system download when generating File C. Therefore, while MPTs may exist in File C, they would not exist in File D1.
 - Awards that contain no cost modifications, such as extending the period of performance, would be reported in File D1/D2, but not File C. Because these awards do not have a financial transactions associated with the modification,

²⁵ File C is the preferred source to select a statistically valid sample of data. Some Federal agencies will experience delays in the ability to report data contained in File C. In this case, Files D1 and D2 should be used as the source to select a statistically valid sample. Reference to File C throughout this section would include Files D1 and D2 if File C is found to not be suitable for testing.

²⁶ Program Activity is an optional element for File C.

there would be no record in the financial system and therefore, no associated record in File C.

- .05 The audit team should assess the completeness of File C and determine if it is suitable for sampling. If File C is not suitable, the sample should be derived from Files D1 and D2.

560 SELECT A STATISTICALLY VALID SAMPLE OF CERTIFIED SPENDING DATA SUBMITTED

- .01 The audit team, with the assistance of a qualified statistician if possible, should randomly select a statistically valid sample of certified spending data from the reported records included in the agency's certified data submission for File C, or D1/D2 if file C is determined not suitable for testing.
- .02 To select a statistically valid sample, the audit team should use the following criteria:
- Population Size – the number of detail records included in the agency's quarterly certified data submission determined by adding the total number of detail records in File C.
 - Confidence level – the probability that a confidence interval produced by sample data contains the true population error; set at 95 percent.
 - Expected error rate – the estimated percentage of error rate in the population to be sampled, which will be determined based on the results of the November 2017 and subsequent testing of DATA Act information, and additional information that the IG has accumulated related to the agency's internal controls and corrective actions from previous audits. If more than one error rate was determined in prior audits, the error rate closest to 50% should be used²⁷. If this is a first year audit of the DATA Act submission and there is no previous testing with which to accurately estimate the expected error, then the expected error rate should be set at 50 percent.
 - Sample Precision – The precision is a measure of the uncertainty associated with the projection; set at 5 percent.

²⁷ If all error rates are less than 20%, then a 20% expected error rate should be used. If all error rates are above 80% then 80% expected error rate should be used. Truncating the assumed error rate to 20% for 2017 estimated rates which are less than 20% and capping the assumed error rate to 80% for 2017 estimates which are greater than 80% ensures a sample size large enough to use the Normal approximation when estimating the sampling error for attribute measures. See Table 3.3 on page 58 of Cochran, "Sampling Techniques", third edition

https://archive.org/stream/Cochran1977SamplingTechniques_201703/Cochran_1977_Sampling%20Techniques_djvu.txt

- Sample Size –The sample size is based on a 95 percent confidence level, the population size, the expected error rate, and a desired sampling precision of 5 percent.²⁸ The sample size will vary by agency but should be no more than 385 records. Auditors should discuss with statisticians the need for replacement sample items.²⁹
- Sample Unit - The statistical sample should be selected and tested by record. A record is considered a row in the data file within File C. A record could be a portion of a transaction or award activity and not necessarily the whole transaction or award activity.

570 TEST DETAILED RECORD-LEVEL LINKAGES FOR FILES C AND D

- .01 The awards reported in File C should be linked to awards reported in Files D1 and D2. The audit team should test the linkages between File C to Files D1 and D2.
- .02 Audit teams should confirm that applicable procurement awards in the sample selected from File C are included in File D1 by matching the Procurement Instrument Identifier Numbers (PIIDs)^{30,31}. Note that the Transaction Obligated Amount in File C may not match the Federal Action Obligation amount in File D1 for the sample record. This is because File C may represent a single line item on a contract with multiple line items, and the amount on File D1 will represent the total contract transaction. Any variances identified by the auditors between Files C and D1 should be clearly explained and documented by the Federal agency. The audit team should assess the reasonableness of the agency’s explanation and resolution of all variances and report on any unusual or unexplained variances it identifies.
- .03 Audit teams should confirm that all financial assistance awards in the sample selected from File C match the Financial Assistance Identifier Numbers (FAIN)³² or Unique Record

²⁸ For agencies with a smaller population and high expected error rates, where the recommended sample size of 385 represents 5 percent or more of the population, the IG may reduce the sample size by applying the finite correction factor using the following formula to determine the recommended sample size: $385/[1+(385/N)]$, where “N” represents the population size.

²⁹ Agencies may include micro purchases below the reporting threshold or other types of records which are not part of the scope of this audit in their File C data submissions. When a record which is out of scope is selected in the sample it should be discarded. If IGs know from prior work that this may occur with their agency they should plan for having replacement sample selections available. The simplest method to plan for this is to randomly sort File C and select the sample as the first 385 records from the random sort. Thus, for example, if there is one out-of-scope record in a sample of 385 the IG can then select the 386th record from the random sort of File C as a replacement sample unit. Note that the sample size of 385 was used only for purposes of the example, many IGs will have a statistical sample size which is less than 385.

³⁰ PIIDs are the Award ID for procurement awards.

³¹ If a sample item is a MPT, the sample item should not be tested and should be replaced with another sample item. See section 560.

³² FAINs are the Award ID for financial assistance awards.

Identifiers (URI) contained in File D2. In addition, the Transaction Obligated Amount in File C should match the Federal Action Obligation amount in File D1. Any variances identified by the auditors between Files C and D2 should be clearly explained and documented by the Federal agency. The audit team should assess the reasonableness of the agency's explanation and resolution of all variances and report on any unusual or unexplained variances it identifies.

- .04 Note that agencies may report financial assistance records containing PII in summary groups of similar awards at the county or state level known as "aggregate records". If single award-level reporting is not practicable, agencies may report at the county or state level. If an agency does not capture a FAIN or other individual details for an award to an individual, the agency should include that award in a county or state level aggregate record with other similar awards. Records reported in this way will be linked using the URI. The auditor should ensure that aggregates are reported consistent with OMB M-17-04. Auditor judgment should be used and documented when testing aggregate records when aggregate records are included in the statistically-valid sample.

580 TEST DETAILED RECORD-LEVEL DATA ELEMENTS FOR FILES C AND D

- .01 The detailed test for statistical projection will be performed at the data element-level for each record selected in the sample. Completeness, accuracy and timeliness will be determined for each of the data elements for the recorded transactions. Statistical projections for completeness, accuracy and timeliness will be determined and reported for the overall data elements tested.
- .02 Completeness of a data element is defined as, for each of the required data elements that should have been reported, the data element was reported in the appropriate Files A through D2. To assess the completeness of the sampled data, determine if the data element is required for the record selected. If required, determine if the data element is included in the appropriate files. Accuracy of the data element will be tested under the accuracy assertion, therefore, only the completion of the data element is considered here. If a data element that should have been required to be reported, was not reported, then the data element is not complete.
- .03 Accuracy of the data element is defined as amounts and other data relating to recorded transactions have been recorded in accordance with the DAIMS RSS, IDD, and the online data dictionary; and agrees with the authoritative source records. Data elements in File C should be matched to the system of record which would be the agency financial system and source documentation. To assess the accuracy of the data elements in Files D1 and D2, refer to Appendix 5, Testing Crosswalks. Appendix 5 provides detailed information on each data element in Files D1 and D2 to include the authoritative source record to test each data element against. The Crosswalk for File D2 is under review and will be provided at a later date.
- .04 Timeliness of the data elements is defined as, for each of the required data elements that should have been reported, the data elements were reported in accordance with the reporting schedules defined by the financial, procurement, and financial assistance

requirements (FFATA, FAR, FPDS-NG, FABS, and DAIMS). To assess the timeliness of the data elements:

- Award financial data elements within File C should be reported within the quarter in which it occurred.
- Procurement award data elements within File D1 should be reported in FPDS-NG within 3 business days after contract award in accordance with the FAR Part 4.604.³³
- Financial assistance award data elements within File D2 should be reported no later than 30 days after award, in accordance with FFATA. To facilitate the timeliness of data available on USAspending.gov, DAIMS v1.3.1 requires agencies to publish available data by the 5th of each month and ensure that prior month data is published completely, no later than the 20th of the current month.³⁴

.05 Completeness, accuracy and timeliness of data elements will be tested independently of each other but may overlap. An error of one kind does not preclude nor assume an error of another kind. The following are several questions the audit team may encounter in their testing and answers on how to treat those scenarios.

How do we handle data elements that are not applicable to a record?

A notation or tickmark should be made in the audit documentation to indicate that the data element was not applicable to the record. The data element should not be included in the calculation of the error rate (in neither the numerator nor the denominator).

What if we don't have any transactions in File C?

Completeness of the agency submission, to include the completeness of File C, is tested separately in Section 550. File C would not be suitable for testing at the detailed level if there was no File C transactions. Therefore, only File D1/D2 data elements would be tested in the statistical sample.

If a transaction is correctly recorded in File C, but data elements are not in File D1/D2 then do we consider those data elements to be inaccurate?

Statistically those data elements must be considered inaccurate. In order to determine the error rate, you must have an answer to the question of whether the data element is accurate (Yes or No) or not applicable. File C items are considered "recorded" and each

³³ The submission to FPDS-NG should be compared to the date the award was made/amended in the accounting records of the originating agency financial system(s), to the extent the record can be relied upon. In addition, the audit team will need to match this information to the originating agency's underlying records.

³⁴ The submission to the broker should be compared to the date the award was made/amended in the accounting records of the originating agency financial system(s), to the extent the record can be relied upon. In addition, the audit team will need to match this information to the originating agency's underlying records.

record is a sample unit. Therefore, if a transaction is correctly recorded in File C, but File D1/D2 data elements are not included, then those File D1/D2 data elements are incomplete, inaccurate, and untimely.

How will we know what data elements were required to be reported in File D1/D2 if no data elements for that record were in File D1/D2? Do we just consider all data elements for File D1/D2 an error?

It would be misleading to assume all data elements for File D are an error, because some of the data elements are dependent on information, such as the type of procurement award. Because the transaction was recorded in File C and included in your sample, you will obtain the supporting documentation for the transaction; thereby you should perform an analysis with that supporting documentation to determine what data elements should have been recorded in File D1/D2.

What if my agency reported an optional data element, but they did not report it accurately, is it an error?

If the agency reported an optional data element, the audit team should test that element for accuracy and the results of that test should be included in the projection. If the agency reported the data element incorrectly, it would be an error. Completeness and timeliness would also be assessed for this type of item. However, if the agency did not report an optional standardized data element, then you would indicate the data element was not applicable for each completeness, accuracy and timeliness; thus, the data element would not be included in the projected error rate (neither the numerator nor denominator).

If a data element is incomplete is it inaccurate?

If a data element that should have been reported but was not reported then the data submitted for that element is incomplete. Because the data element is incomplete, it is also inaccurate. In order to determine the error rate, you must have an answer to the question of whether the data element is accurate (Yes or No) or not applicable.

If a data element is not timely then is it inaccurate?

Not necessarily, accuracy is not dependent on timeliness. However, if the lack of timeliness led to an incomplete data element in a recorded transaction, then the item would be not timely and also incomplete, and inaccurate.

If a data element is not timely then is it incomplete?

It depends. It could potentially be both however, it would depend on the scenario.

How should the auditor assess the timeliness and completeness of the data included in the submission, but that was not yet required to be reported in the system (like FPDS-NG)?

The FPDS-NG and FABS schedules are shorter than the schedule for the submission as a whole, so theoretically all FPDS-NG and FABS items should be in the submission. There may be a need to assess this on a case-by-case basis if the need arises.

What if we find errors attributable to a third party and not to the agency?

All errors should be included in the statistical sampling results. Therefore, whether the error was caused by the agency or a third party system (such as the Treasury DATA Act Broker) the error should be considered an error for the statistical projection. This allows the reader to obtain a true picture of the quality of data reported. However, IGs generally should not include recommendations in the report for errors that are not considered attributable to the agency. It is important to communicate the errors that are not attributable to the agency separately in the final report. See Section 710.03 for an example on how to report this information.

- .06 Error rates will be calculated and projected for the results of each completeness, accuracy and timeliness of the data elements. An average rate of error is first calculated for each record based on the total data elements required to be reported (including optional data elements chosen to be reported by the agency) for that record. To calculate the overall error rates, the average rates of error by record will be averaged over the total number of sample items tested. Appendix 6 details the technical statistical discussion of the sampling technique. Below is an example of the expected calculations for the error rates for each of the assertions when using a random sample selection technique. This example is not inclusive of all data elements or possible scenarios. See Appendix 7 for the Testing Results Spreadsheet tool recommended for use in summarizing the results of the detailed record-level test of data elements for Files C and D1/D2, and Appendix 8 for reporting the results and error rates for the 57 data elements tested.

.07 Quality of the data sampled is defined as data that is complete, accurate, and provided timely. The audit team will use the results of the statistical sample performed in this section in order to provide a range of results for quality. If the highest error rate of completeness, accuracy and timeliness is between 0% and 20% then the quality would be considered Higher (Green). If the highest error rate is between 21% and 40% then the quality would be considered Moderate (Yellow). If the highest error rate is 41% or more, then the quality would be considered Lower (Red). This would be assessed on the midpoint of the projected error of the sample and not include the range of the projected error rates. (For example, if the results of the statistical projection results in the highest error rate of 30% +/- 15%; we would consider this of moderate quality based on the error rate of 30% even though the range of error would be between 15% and 45%). Additional examples include the following:

Error Rates

Accuracy: 20%

Timeliness: 10%

Completeness: 19%

Quality: **HIGHER**

Accuracy: 25%

Timeliness: 10%

Completeness: 19%

Quality: **MODERATE**

Accuracy: 46%

Timeliness: 0%

Completeness: 0%

Quality: **LOWER**

590 ANALYZE RESULTS

- .01 Completeness of the agency submission is defined as, transactions and events that should have been recorded are recorded in the proper period. In order to report on the completeness of the agency submission, the audit team should analyze the results of the reconciliations and analysis of Files A through C. Section 540 discusses the procedures for reconciling summary-level data and linkages for Files A, B and C to determine completeness; and Section 550 discusses the analysis of completeness for File C. The determination of the completeness of the agency submission should be included in the final report.
- .02 The agency submission is considered timely when the submission by the agency to the DATA Act Broker is in accordance with the reporting schedules established by the Treasury DATA Act PMO. Section 530 discusses the analysis of timeliness for the agency submission. The determination of the timeliness of the agency submission should be included in the final report.

- .03 Significant variances and errors found while performing reconciliations of summary-level data and linkages for Files A, B, and C as described in Section 540 should be included in the final report. Significant variances and errors found while performing the testing of linkages between Files C and D1/D2 in the detailed testing of the record-level data elements in Section 570 should also be reported in the final report.
- .04 Significant findings noted while performing the detailed testing of the record-level data elements and the projected error rates for completeness, accuracy and timeliness attributes related to the record-level data elements statistical sampling test as described in Section 580 should be included in the final report.
- .05 Using the projected error rates as described in Section 580, determine whether the quality of data is higher (green), moderate (yellow), or lower (red). This should be included in the final report.
- .06 Supplemental (non-projected) reporting of the results of the sample testing should also be included in the final report. The supplemental reporting is essential to ensuring the readers and stakeholders of the final report obtain crucial information for making informed decisions. The supplemental Data Element Analysis is required to be included in the report. The Analysis of the Accuracy of Dollar Value-related Data Elements and the Analysis of Errors in Data Elements Not Attributable to the Agency are highly encouraged to be included in the report. Examples of reporting the results of the following information are provided in Section 710.

Data Element Analysis

It's important to identify the number of errors associated with each data element. Presenting an analysis of the results of the completeness, accuracy, and timeliness of sampled items by data element will help inform the stakeholders about which data elements may be more reliable than others. It will also provide the agency with information on where they may want to focus their efforts to correct errors confined to certain data elements. In evaluating the results by data element, determine if the identified risk in the agency's DQP, if available, were consistent with the results of testing for reported data. Audit teams may give consideration to the agency identified risk when reporting on the results of data tested.

Analysis of the Accuracy of Dollar Value-related Data Elements

There are stakeholders that are interested in easily determining the results of the test of accuracy over dollar value-related data elements. The supplemental reporting of the data elements will provide an easy to find source for this information. Additionally, by including the absolute value of those errors, the magnitude of error can be inferred by the reader. It's important to emphasize in reporting these results that the amounts are not projectable because the statistical sample test was performed on attributes and not on monetary amounts.

Analysis of Errors in Data Elements Not Attributable to the Agency

There are instances where errors are caused by an entity other than the agency. For example, if Treasury's DATA Act Broker extracts the wrong field from a source system, this is not an error that was attributable to the agency. The agency may have recorded the correct information in the source system, but due to an external third party extracting the incorrect field, the data was not reported accurately. In this instance, the error is included in the statistical results, but reporting the supplemental information will help the reader put into perspective the types of errors that were within the control of the agency.

600 FEDERAL SHARED SERVICE PROVIDERS

- .01 Federal shared services are an arrangement under which one agency (the provider) provides information technology, human resources, financial, or other services to other departments, agencies, and bureaus (the customers). This arrangement allows customer agencies to focus resources on their primary mission. OMB placed an emphasis on streamlining Federal financial management systems.
- .02 As described in OMB's M-13-08, traditional approaches to financial system implementations have left agencies exposed to significant risks in cost, quality and performance. Also, the highly fragmented nature of previous financial systems across Federal agencies has contributed to inconsistencies in financial data, making it challenging to provide transparency into Federal finances. OMB explained that the cost, quality, and performance of Federal financial systems can be improved by focusing government resources on fewer, more standardized solutions that are implemented and operated by more experienced staff. The Federal Government can achieve this with wider use of shared services for common system and transaction processing needs.
- .03 According to OMB, the use of shared services, with standardized financial systems, will:
 - better enable the Federal government to strategically source software providers, hosting, and (potentially) transaction processing,
 - reduce system implementation risks and timelines,
 - ease the adoption of new government-wide requirements (such as the DATA Act), and
 - improve data quality and provide greater transparency into Federal finances, including the production of auditable financial statements at the government-wide level.
- .04 The use of Federal Shared Service Providers (FSSP) also creates additional areas of concern to be considered with the DATA Act audit. Briefly, IGs across the Federal government should ensure that:
 - agencies and FSSPs are coordinating throughout the agency's continued DATA Act implementation and processing of information;

- agencies are tracking FSSP statuses if they must further upgrade systems or processes to comply with the DATA Act requirements and ensure these responsibilities are reflected in their service agreement;
- agencies and FSSPs have established internal controls and reporting responsibilities for FSSPs and their customers;
- FSSPs are continuing to engage customers;
- FSSPs, in coordination with their customer agencies are continuing to determine applicable data elements and identify gaps and issues;
- customers are represented in communication with agencies such as OMB, Treasury, and external stakeholders; and
- FSSPs have identified and resolved areas of concern brought to their attention by customer agencies and their IGs based on the prior DATA Act submissions and audits.

610 SHARED SERVICE CUSTOMER IG AUDIT STEPS

- .01 Due to the nature of the shared services provided and received, the steps described in this section should be performed in conjunction with the procedures contained throughout this Guide. Please note that these procedures are intended to be a guide that can be utilized by any FSSP customer agency IG. Accordingly, some review procedures may not be applicable to your agency and/or may need to be adjusted based on the needs of the respective IG.
- .02 If findings are noted as a result of the IGs of FSSP Customer Agencies' assessment, IGs of FSSP Customer Agencies should communicate concerns to the Agency SAO. IGs of FSSP Customer Agencies should also share concerns about their agency's data and/or error rates that are attributable to its FSSP to both the FSSP IG and GAO, as these two entities have jurisdiction to perform oversight work on the FSSP. FSSP IGs should appoint a point of contact for their IGs so that FSSP Customer Agencies' IGs can report these concerns. FSSP IGs will determine if the concerns are significant enough to recommend action based on noted trends in the concerns and as a result of their own work over the FSSP. If concerns are significant enough to recommend action, FSSP IGs can include these concerns in their oversight reports and make recommendations to the FSSP in an "Other Matters" section. IGs of FSSP Customer Agencies could also recommend that their agency work with the FSSP to address issues or concerns.
- .03 Determine what major components in your agency use Federal shared services that directly relate to the reporting requirements under the DATA Act and how they are being engaged as it relates to the implementation of the DATA Act.
 - a. Ensure the DATA Act reporting roles and responsibilities for financial, procurement, grants, and loan information are being established between the customers and their shared service providers and documented in their service agreement.

- b. Determine if the component(s) within your agency has continued representation within the shared service provider's governance structure (e.g., the customer agency is a member of the shared service provider's DATA Act Working Group).
 - c. Determine if the component(s) within your agency documented an understanding and acknowledged the extent the shared service provider will report on its behalf.
 - Ensure the component(s) within your agency understands what financial and non-financial award data the shared service provider will submit on its behalf (i.e. the level of service to be provided).
 - If the shared service provider does not house all required payment and financial data (e.g. grant data) for the component(s) within your agency, will the component(s) within your agency be required to submit additional data to the shared service provider for DATA Act reporting or will the component(s) within your agency be responsible for submitting the data through its own agency? (e.g., if the component(s) within your agency houses its own grants data, will the component(s) within your agency submit grant data to the shared service provider for reporting?)
 - If the component(s) within your agency is responsible for submitting data to the shared service provider, ensure that the component(s) within your agency has developed a continued plan to provide the required data and communicated the plan to the shared service provider.
 - If applicable, determine if the component(s) within your agency received notification from the shared service provider of any further business process changes it needed to implement. For example, changes to business processes to ensure data elements are captured, appropriate awardee information is reported, and payment and financial transactions are reported accurately.
 - Determine whether the component(s) within your agency is (are) taking the necessary actions to implement further business changes.
 - Determine if the FSSP submits the DATA Act information on behalf of the customer agency. If they do, how does the agency SAO certify their agency's data submissions? Since the SAO certification is on the data submission web page, another certification mechanism should be in place for the FSSP to submit on behalf of the customer. If the FSSP did submit on behalf of the customer, clarify how they did so and how the SAO certified the data.
- .04 Utilize section 300: Assessment of Internal Controls to determine if the Agency follows the five components and 17 related principles of internal controls, as applicable for FSSP agreed upon customer controls of data related to the DATA Act reporting objective.
- To assist in the risk assessment to determine the amount of work to be performed related to data managed by the FSSP:

- a. Inquire if the FSSP IG has, has not, or will perform work over its FSSP internal controls over DATA Act submission and compliance with the DATA Act.

If they have:

- Inquire when they plan on issuing the results of their work (if it has not already been issued).
- Inquire and obtain the results of the work they have performed up to the date of the customer IG risk assessment.

If they have not:

- Document that no work was performed.

If they plan to:

- Inquire into the steps and amount of work they plan to perform so efforts are not duplicated.
- Request that they share audit progress and findings while performing customer IG audit steps.

- b. Inquire if the agency has encountered any issues with the FSSP carrying out its roles and responsibilities for its implementation and compliance with the DATA Act:

- Document the issues encountered.
- Document how the issues were identified/reported.
- Analyze and document the impact they have on the agency's ability to comply with the DATA Act.
- Analyze and document what has been done to mitigate these issues. For example, what compensating controls have been implemented?

- c. Review the most recent FSSP Service Organization Control (SOC) report available for any control deficiencies related to DATA Act submissions. Utilize GAO/CIGIE's *Financial Audit Manual* section 640, Using the Work of Others-Entities Using a Service Organization and 640A, Service Organization Type 2 Report Assessment Tool.

- Determine if the findings could have a significant impact on the agency's DATA Act submission
- Identify if any corrective actions have been implemented by the agency and FSSP to address the reported deficiencies. Specifically, what compensating controls, if any, has the agency or FSSP implemented to address reported deficiencies and are they operating effectively to reduce the chance of misstatement?
- The FSSP (SOC) report will not cover internal controls outside of the FSSP source system. Since many agencies export the DATA Act information to excel spreadsheets to manipulate prior to submission to Treasury's DATA Act Broker, auditors should review the internal controls in place to ensure that the data

submitted to Treasury's DATA Act Broker matches the data exported from their systems. The FSSP should also have controls in place to verify that Treasury's DATA Act Broker received the submission. These steps can be completed in section 300: Assessment of Internal Controls over the DATA Act Submission.

700 REPORTING

- .01 The audit team should produce a report of the results of this audit in conformance with GAGAS. Each IG report should contain, at a minimum, the following information:
- Completeness of the DATA Act Submission – This will include the assessment of completeness for Files A, B and C. (Sections 540 and 550)
 - Timeliness of the DATA Act Submission (Section 530)
 - Specific results of the test work to include:
 - i. Results of summary-level testing of Files A and B (if no test work was performed, report should indicate why no test work was performed on Files A and B) (Section 540)
 - ii. Projected error rates for completeness, accuracy and timeliness of the statistical sample from Files C and D (Section 580)
 - iii. Final determination of the quality of the data (Section 580)
 - iv. Supplemental (non-projected) reporting of the results of the sample testing (Section 590):
 1. Data Element Analysis
 2. Analysis of the Accuracy of Dollar Value-related Data Elements
 3. Analysis of Errors in Data Elements Not-Attributable to the Agency
 - Final determination of the agency's implementation and use of the data standards. (Section 400); and
 - The scope of work on internal control and any Identified control deficiencies that may adversely impact the completeness, accuracy timeliness, and quality of the data submitted, or implementation and use of the data standards. (Section 300)

710 EXAMPLE OF SUPPLEMENTAL (NON-PROJECTED) REPORTING OF THE RESULTS OF THE SAMPLE TESTING

- .01 Data Element Analysis (Section 590.06)

The analysis of results by data elements can be reported using the example in Appendix 8. The audit team may want to sort the results by error rate in order to provide the stakeholders with easy to discern information regarding which data elements were determined to have the highest instances of error. Additionally the report should discuss whether the results are consistent with the risks identified in the agency's DQP.

.02 Analysis of the Accuracy of Dollar Value-related Data Elements (Section 590.06)

Below is an example of how the results of the accuracy of the data elements related to dollar value can be displayed in the report. This provides the stakeholders with easy to discern information regarding those data elements that are associated with a dollar-value. The absolute value of errors by data element will provide the stakeholders with additional information. However, it's important to note that these amounts are not projectable, and if included in the audit report, the audit team should include an explanation as such.

Accuracy of Dollar-Value Related Data Elements							
PIID/FAIN	Data Element	Accurate	Not Accurate	Not Applicable	Total Tested	Error Rate	Absolute Value of Errors
PIID	DE 11 Federal Action Obligation	365	0	6	371	0% \$	-
PIID	DE 14 Current Total Value Of Award	361	1	9	371	0% \$	120,000
PIID	DE 15 Potential Total Value Of Award	367	1	3	371	0% \$	120,000
PIID	DE 53 Obligation	300	50	21	371	14% \$	500,000
FAIN	DE 11 Federal Action Obligation	14	0	0	14	0% \$	-
FAIN	DE 12 Non-Federal Funding Amount	0	0	14	14	0% \$	-
FAIN	DE 13 Amount of Award	14	0	0	14	0% \$	-
FAIN	DE 14 Current Total Value Of Award	14	2	0	14	14% \$	800
FAIN	DE 53 Obligation	5	1	0	6	17% \$	400
Total		1,440	55	53	1,546		

.03 Analysis of Errors in Data Elements Not-Attributable to the Agency (Section 590.06)

Below is an example of how to display the results for the errors in data elements that are not attributable to the agency. This provides the stakeholders with easy to discern information regarding those data elements that were caused by a third party system, such as Treasury's DATA Act Broker. The audit team should include an explanation in the report that describes the reason for the third party system error, whether the third party is aware of the issue and any plans to correct the issue (if known).

Errors in Data Elements Not Attributable to the Agency			
PIID/FAIN	Data Element	Attributed to	
PIID	DE 14 Current Total Value Of Award	Treasury's DATA Act Broker Extracting from FPDS-NG	
PIID	DE 5 Legal Entity Address Legal Entity Address State Description	FPDS-NG Extracting from SAM	
PIID	DE 16 Award Type IDV_Type	Treasury's DATA Act Broker Extracting from FPDS-NG	
FAIN	DE 5 Legal Entity Address Legal Entity Address State Description	Treasury's DATA Act Broker Extracting from FABS	
FAIN	DE 30 Primary Place of Performance Address Primary Place of Performance County Name	Treasury's DATA Act Broker Extracting from FABS	

.04 Additional Example Verbiage for Inclusion in the Reports

We have provided some example verbiage for IGs to use in creating their reports. The Background and Scope sections from this guide can be used as a basis for the Background and Scope sections of the report.

- DATA Act Date Anomaly

To manage stakeholder expectations regarding IGs compliance with the DATA Act timelines, we suggest including the following standard statement explaining CIGIE's response to the date anomaly in the DATA Act (see the Background

section for more information on the anomaly). Including a copy of the CIGIE letter found in Appendix 1 is also strongly encouraged.

The Council of the Inspectors General on Integrity and Efficiency (CIGIE) identified a timing anomaly with the oversight requirements contained in the Digital Accountability and Transparency Act of 2014. That is, the first Inspector General (IG) reports were due to Congress on November 2016; however, Federal agencies were not required to report spending data until May 2017. To address this reporting date anomaly, the IGs provided Congress with their first required reports by November 8, 2017, 1-year after the statutory due date, with two subsequent reports to be submitted following on a 2-year cycle. On December 22, 2015, CIGIE's chair issued a letter detailing the strategy for dealing with the IG reporting date anomaly and communicated the strategy to the Senate Committee on Homeland Security and Governmental Affairs and the House Committee on Oversight and Government Reform.

- Assessment of DATA Act Submission

Completeness and Timeliness of the Agency Submission

Submission was Complete and Timely:

We evaluated [Agency]'s DATA Act submission to Treasury's DATA Act Broker and determined that the submission was complete and submitted timely. To be considered a complete submission, we evaluated Files A, B and C to determine that all transactions and events that should have been recorded were recorded in the proper period.

Submission was Timely, but not Complete:

We evaluated [Agency]'s DATA Act submission to Treasury's DATA Act Broker and determined that the submission was submitted timely within 45 days of quarter end. However, we determined that the submission was not complete. To be considered a complete submission, we evaluated Files A, B and C to determine that all transactions and events that should have been recorded were recorded in the proper period. During our test work, we noted that [add details of the errors noted].

Submission was Complete, but not Timely:

We evaluated [Agency]'s DATA Act submission to Treasury's DATA Act Broker and determined that the submission was complete. However, we determined that the submission was not submitted timely within 45 days of quarter end in accordance with the DAIMS. [Add details of the errors noted].

Summary-Level Data and Linkages for Files A, B, and C

We reconciled Files A and B to determine if they were accurate. Through our test work, we noted that Files A and B were accurate. Additionally we reconciled the linkages between Files A, B and C to determine if the linkages were valid and to identify any significant variances between the files. Our test work did not identify any significant variances between Files A, B, and C.

Or

We did not perform reconciliations on Files A and B [provide specific information on why these files were not evaluated].

Or

We reconciled Files A and B to determine the accuracy of Files A and B. Through our test work, we noted that Files A and B were accurate. Additionally we reconciled the linkages between Files A, B and C to determine if the linkages were valid and to identify any significant variances between the files. Our test work noted the following significant variances between Files A, B, and C [include a table and discussion of the variances].

Record-Level Data and Linkages for Files C and D

We selected a sample of XX records and tested XX data elements for completeness, accuracy, and timeliness.

Completeness of the Data Elements

The projected error rate for the completeness of the data elements is XX.X%^{Footnote}. A data element was considered complete if the required data element that should have been reported was reported.

Footnote: Based on a 95% confidence level, the projected error rate for the completeness of the data elements is between XX% and XX%.

Accuracy

The projected error rate for the accuracy of the data elements is XX.X%^{Footnote}. A data element was considered accurate when amounts and other data relating to recorded transactions were recorded in accordance with the DAIMS RSS, IDD, and the online data dictionary, and agree with the authoritative source records.

Footnote: Based on a 95% confidence level, the projected error rate for the accuracy of the data elements is between XX% and XX%.

Timeliness of the Data Elements

The projected error rate for the timeliness of the data elements is XX.X%^{Footnote}. The timeliness of data elements was based on the

reporting schedules defined by the procurement and financial assistance requirements (FFATA, FAR, FPDS-NG, FABS and DAIMS).

Footnote: Based on a 95% confidence level, the projected error rate for the timeliness of the data elements is between XX% and XX%.

Quality

The quality of the data elements was determined using the midpoint of the range of the proportion of errors (error rate) for completeness, accuracy and timeliness. The highest of the three error rates was used as the determining factor of quality. The following table provides the range of error in determining the quality of the data elements.

Highest Error Rate	Quality Level
0% - 20%	Higher
21% - 40%	Moderate
41% and above	Lower

Based on our test work and the highest error rate of XX%, we determined that the quality of [Agency]’s data is considered [Higher/Moderate/Lower].

Implementation and Use of the Data Standards

We have evaluated [Agency]’s implementation and use of the government-wide financial data standards for spending information as developed by OMB and Treasury. [Agency] (has/has not) fully implemented and (are/are not) using those data standards as defined by OMB and Treasury. [Explain how the agency has/has not implemented and are/are not using the data standards. Specifically, has the agency identified, linked by common identifiers (e.g. PIID, FAIN), all of the data elements in the agency’s procurement, financial, grants, and loan systems, as applicable.]

- .05 The due date for this report is November 8, 2019. The report should be addressed to the agency SAO, made publicly available, and distributed to the following:

United States Senate Committee on Homeland Security and Governmental Affairs
Addressed to the Chairman and Ranking Member
340 Dirksen Senate Building
Washington, DC, 20510
202-224-4751

United States House Committee on Oversight and Reform
Addressed to the Chairman and Ranking Member
2157 Rayburn House Office Building
Washington, DC 20515
202-225-5074

United States Senate Committee on the Budget
Addressed to the Chairman and Ranking Member
624 Dirksen Senate Office Building
Washington, DC 20510
202-224-0642

United States House Committee on the Budget
Addressed to the Chairman and Ranking Member
204-E Cannon House Office Building
Washington, D.C. 20515
202-226-7270

GAO

Reports can be electronically submitted to DATAActImplementation@gao.gov

Treasury IG

Reports can be electronically submitted to DATAAct@oig.treas.gov

* * * * *

For additional information regarding this guide, please contact Pauletta Battle, Chair of the FAEC DATA Act Working Group at (202) 927-5792 or DATAAct@oig.treas.gov. Other contributors to this guide are listed in Appendix 9.

Abbreviations and Short References

AICPA	American Institute of Certified Public Accountants
Award ID	Award Identification
CIGIE	Council of the Inspectors General on Integrity and Efficiency
DAIMS	DATA Act Information Model Schema
DATA Act	Digital Accountability and Transparency Act of 2014
DQP	Data Quality Plan
ERM	Enterprise Risk Management
FABS	Financial Assistance Broker Submission
FAEC	Federal Audit Executive Council
FAIN	Financial Assistance Identifier Number
FAR	Federal Acquisition Regulation
FFATA	Federal Funding Accountability and Transparency Act of 2006
FFMIA	Federal Financial Management Improvement Act of 1996
FPDS-NG	Federal Procurement Data System – Next Generation
FSRS	FFATA Sub-award Reporting System
GAGAS	Generally Accepted Government Auditing Standards
GAO	Government Accountability Office
GSA	General Services Administration
GTAS	Government-wide Treasury Account Symbol
IDD	Interface Definition Document
IG	Inspector General
IGT	Intragovernmental Transactions
MPM	Management Procedures Memorandum
MPT	Micro Purchase Threshold
OMB	Office of Management and Budget
PII	Personally Identifiable Information
PIID	Procurement Instrument Identifier Number
PMO	Project Management Office
RSS	Reporting Submission Specification
SAM	System for Award Management
SAO	Senior Accountable Official
SOC	Service Organization Controls
TAS	Treasury Account Symbol
Treasury	Department of the Treasury
URI	Unique Record Identifiers
Working Group	FAEC DATA Act Working Group

Appendix 1

CIGIE's DATA Act Anomaly Letter Submitted to the Senate Committee on Homeland Security and Governmental Affairs and the House Committee on Oversight and Government Reform

APPENDIX 1: CIGIE'S DATA ACT ANOMALY LETTER



December 22, 2015

The Honorable Ron Johnson
Chairman
The Honorable Thomas Carper
Ranking Member
Committee on Homeland Security
and Governmental Affairs
United States Senate
Washington, D.C.

The Honorable Jason Chaffetz
Chairman
The Honorable Elijah Cummings
Ranking Member
Committee on Oversight and Government Reform
U.S. House of Representatives
Washington, D.C.

Dear Mr. Chairmen and Ranking Members:

The Council of the Inspectors General on Integrity and Efficiency (CIGIE) recognizes and appreciates your leadership on issues of Government transparency and accountability. In particular, we believe the enactment last year of the Digital Accountability and Transparency Act of 2014 (DATA Act) will significantly improve the quality of Federal spending data available to Congress, the public, and the accountability community if properly implemented. To make sure this happens, the DATA Act provides for strong oversight by way of the Federal Inspectors General and the Government Accountability Office (GAO). In particular, the DATA Act requires a series of reports from each to include, among other things, an assessment of the completeness, timeliness, quality, and accuracy of data submitted by agencies under the DATA Act.

I am writing this letter on behalf of CIGIE to inform you of an important timing anomaly with the oversight requirement for Inspectors General in the DATA Act. Your staffs have been briefed on this timing anomaly, which affects the first Inspector General reports required by the DATA Act. Specifically, the first Inspector General reports are due to Congress in November 2016. However, the agencies we oversee are not required to submit spending data in compliance with the DATA Act until May 2017. As a result, Inspectors General would be unable to report on the spending data submitted under the Act, as this data will not exist until the following year. This anomaly would cause the body of reports submitted by the Inspectors General in November 2016 to be of minimal use to the public, the Congress, the Executive Branch, and others.

To address this reporting date anomaly, the Inspectors General plan to provide Congress with their first required reports in November 2017, a one-year delay from the due date in statute, with subsequent reports following on a two-year cycle, in November 2019 and November 2021. We believe that moving the due dates back one year will enable the Inspectors General to meet the

1717 H Street, NW, Suite 825, Washington, DC 20006

Appendix 1

CIGIE's DATA Act Anomaly Letter Submitted to the Senate Committee on Homeland Security and Government Affairs and the House Committee on Oversight and Government Reform

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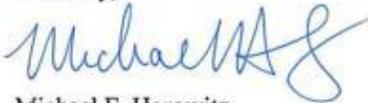
intent of the oversight provisions in the DATA Act and provide useful reports for the public, the Congress, the Executive Branch, and others.

Although we think the best course of action is to delay the Inspector General reports, CIGIE is encouraging the Federal Inspector General Community to undertake DATA Act "readiness reviews" at their respective agencies well in advance of the first November 2017 report. Through a working group, CIGIE has developed guidance for these reviews. I am pleased to report that several Inspectors General have already begun reviews at their respective agencies, and many Inspectors General are planning to begin reviews in the near future. We believe that these reviews, which are in addition to the specific oversight requirements of the Act, will assist all parties in helping to ensure the success of the DATA Act implementation.

We have kept GAO officials informed about our plan to delay the first Inspector General reports for one year, which they are comfortable with, and our ongoing efforts to help ensure early engagement through Inspector General readiness reviews.

Should you or your staffs have any questions about our approach or other aspects of our collective DATA Act oversight activities, please do not hesitate to contact me at (202) 514-3435.

Sincerely,



Michael E. Horowitz
Chair, Council of the Inspectors General on Integrity and Efficiency
Inspector General, U.S. Department of Justice

cc: The Honorable David Mader, Controller, OMB
The Honorable Gene Dodaro, Comptroller General, GAO

Appendix 2

Suggested Criteria for the Inspectors General Guide to Compliance Under the DATA Act

APPENDIX 2: SUGGESTED CRITERIA

	Criteria	Link
1	Digital Accountability and Transparency Act of 2014	https://www.gpo.gov/fdsys/pkg/PLAW-113publ101/pdf/PLAW-113publ101.pdf
2	Federal Funding Accountability and Transparency Act of 2006	https://www.gpo.gov/fdsys/pkg/PLAW-109publ282/pdf/PLAW-109publ282.pdf
3	The Federal Financial Management Improvement Act of 1996	https://www.gpo.gov/fdsys/pkg/PLAW-104publ208/pdf/PLAW-104publ208.pdf
4	The Federal Managers' Financial Integrity Act of 1982	https://www.gpo.gov/fdsys/pkg/STATUTE-96/pdf/STATUTE-96-Pg814.pdf
5	OMB Circular No. A-123	https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2016/m-16-17.pdf
6	OMB Circular No. A-123, Appendix A	https://www.whitehouse.gov/wp-content/uploads/2018/06/M-18-16.pdf
7	OMB – Management Procedures Memorandum No. 2016-03	https://obamawhitehouse.archives.gov/sites/default/files/omb/financial/memos/management-procedures-memorandum-no-2016-03-additional-guidance-for-data-act-implementation.pdf
8	OMB – M-17-04 Additional Guidance for DATA Act Implementation: Further Requirements for Reporting and Assuring DATA Reliability	https://obamawhitehouse.archives.gov/sites/default/files/omb/memoranda/2017/m-17-04.pdf
9	OMB M – 10-06, Open Government Directive	https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2010/m10-06.pdf
10	OMB's Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies	https://www.gpo.gov/fdsys/pkg/FR-2002-02-22/pdf/R2-59.pdf

Appendix 2

Suggested Criteria for the Inspectors General Guide to Compliance Under the DATA Act

	Criteria	Link
11	OMB: Open Government Directive – Framework for the Quality of Federal Spending Information	https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/financial_pdf/Open_Government_Directive_02082010.pdf
12	DAIMS v 1.3 (includes RSS & IDD)	https://www.fiscal.treasury.gov/data-transparency/data-act-v1.3.html
13	DAIMS v 1.3 Practices and Procedures	https://community.max.gov/download/attachments/754091528/DAIMS-Practices%20and%20Procedures-v1.3.pdf?api=v2
14	The DATA Act Online Data Dictionary	https://www.usaspending.gov/#/download_center/data_dictionary
15	The Data Exchange Standard	https://fedspendingtransparency.github.io/data-model/
16	Data Quality Playbook	https://cfo.gov/data-act/
17	Federal Spending Transparency Data Standards	https://max.gov/maxportal/assets/public/offm/DataStandardsFinal.htm
18	DATA Act Broker Validation Rules	https://broker.usaspending.gov/#/validations?_k=swinym
19	DATA Act Broker Submission Practices and Procedures	https://community.max.gov/download/attachments/754091528/DAIMS-Practices%20and%20Procedures-v1.3.pdf?api=v2
20	U. S. Digital Services Playbook	https://playbook.cio.gov/#plays_index_anchor
21	GAO Financial Audit Manual, Volume 1,2,3	http://www.gao.gov/financial_audit_manual/overview
22	Government Auditing Standards (The Yellow Book)	http://www.gao.gov/yellowbook/overview
23	ELECTRONIC GOVERNMENT: Implementation of the Federal Funding Accountability and Transparency Act of 2006	http://www.gao.gov/assets/310/301849.pdf

Appendix 2

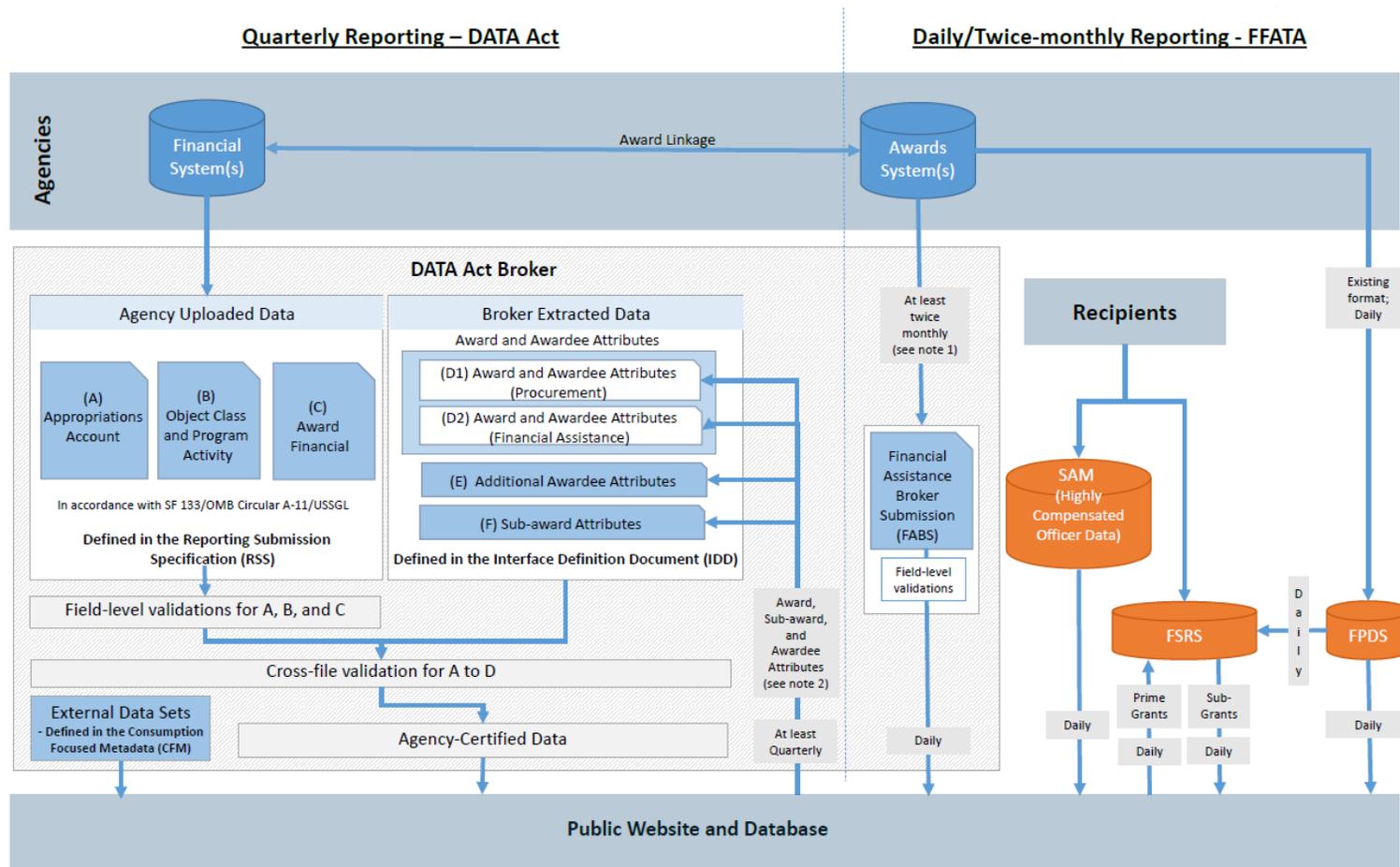
Suggested Criteria for the Inspectors General Guide to Compliance Under the DATA Act

	Criteria	Link
24	DATA Transparency: Oversight Needed to Address Underreporting and Inconsistencies on Federal Award Website	http://www.gao.gov/assets/670/664536.pdf
25	Standards for Internal Control in the Federal Government	http://www.gao.gov/products/GAO-14-704G
26	Federal Acquisition Regulation	https://www.acquisition.gov/?q=browsefar

Appendix 3

DATA Act Information Flow Diagram

APPENDIX 3: DATA ACT INFORMATION FLOW DIAGRAM



Note 1: The Financial Assistance Broker Submission (FABS) replaces the Award Submission Portal (ASP).

Note 2: D1 and D2 pull in all award data associated with the submitting agency and agency-specified action dates. E pulls in highly-compensated officer information for DUNS numbers that appear in an agency's D1 and D2.

F pulls in all sub-award data associated with the awards that appear in an agency's D1 and D2.

Schema Version 1.3
June 29, 2018

Source: Department of the Treasury. <https://www.fiscal.treasury.gov/data-transparency/resources.html>

APPENDIX 4: MAPPING OF DATA ELEMENTS

57 Data Elements Mapped to Files A to D2							
Data Element #	Data Element Name	Links among Files					Comment
		File A	File B	File C	File D1	File D2	
1	Awardee/Recipient Legal Entity Name				•	•	
2	Awardee/Recipient Unique Identifier				•	•	
3	Ultimate Parent Unique Identifier				•	•	
4	Ultimate Parent Legal Entity Name				•	•	
5	Legal Entity Address				•	•	
6	Legal Entity Congressional District				•	•	
7	Legal Entity Country Code				•	•	
8	Legal Entity Country Name				•	•	
9	Highly Compensated Officer Name						Reported in Files E and F
10	Highly Compensated Officer Total Compensation						Reported in Files E and F
11	Federal Action Obligation				•	•	
12	Non-Federal Funding Amount					•	
13	Amount of Award					•	
14	Current Total Value of Award				•	•	
15	Potential Total Value of Award				•		
16	Award Type				•	•	
17	NAICS Code				•		
18	NAICS Description				•		
19	Catalog of Federal Domestic Assistance (CFDA) Number					•	
20	Catalog of Federal Domestic Assistance (CFDA) Title					•	
21	Treasury Account Symbol (excluding Sub-Account)						Included with Data Element #51
22	Award Description				•	•	
23	Award Modification / Amendment Number				•	•	
24	Parent Award ID Number			•	•		
25	Action Date				•	•	
26	Period of Performance Start Date				•	•	
27	Period of Performance Current End Date				•	•	
28	Period of Performance Potential End Date				•		
29	Ordering Period End Date				•		

57 Data Elements Mapped to Files A to D2

Data Element #	Data Element Name	Links among Files					Comment
		File A	File B	File C	File D1	File D2	
30	Primary Place of Performance Address				•	•	
31	Primary Place of Performance Congressional District				•	•	
32	Primary Place of Performance Country Code				•	•	
33	Primary Place of Performance Country Name				•	•	
34	Award ID Number (PIID/FAIN)			•	•	•	
35	Record Type					•	
36	Action Type				•	•	
37	Business Types					•	
38	Funding Agency Name				•	•	
39	Funding Agency Code				•	•	
40	Funding Sub Tier Agency Name				•	•	
41	Funding Sub Tier Agency Code				•	•	
42	Funding Office Name				•	•	
43	Funding Office Code				•	•	
44	Awarding Agency Name				•	•	
45	Awarding Agency Code				•	•	
46	Awarding Sub Tier Agency Name				•	•	
47	Awarding Sub Tier Agency Code				•	•	
48	Awarding Office Name				•	•	
49	Awarding Office Code				•	•	
50	Object Class		•	•			
51	Appropriations Account	•	•	•			
52	Budget Authority Appropriated	•					
53	Obligation	•	•	•			
54	Unobligated Balance	•	•	•			
55	Other Budgetary Resources	•					
56	Program Activity		•	•			
57	Outlay	•	•	•			

APPENDIX 5: TESTING CROSSWALKS

Click on the link below to access the crosswalk on Max.gov.

<https://community.max.gov/display/IG/2019+Required+Review+Guide>

Appendix 5 CIGIE/FAEC FY19 File D1 Crosswalk				Source: CIGIE FAEC Common Methodology Work Group Determination			
Source: DAIMS v1.3 IDD D1							
Structured Sort Order	Element Number	Data Element Label	FPDS Screen Name	Required for File D?	System Extracted or Derived?	Source for Audit Testing	Additional Information
01.A.01	34(A)	PID	Award ID - Procurement Instrument Identifier	Yes	No	Agency Award Documentation ¹	<p>FPDS-NG Data Element Dictionary: Derivation: None Definition: The unique identifier for each contract, agreement or order. Instruction: Enter the Contract, Purchase Order, or Agreement number for the instant action. If you are reporting a delivery/task order, enter the order number. Proposed FAR 4.11 prescribes convention for numbering Contracts, Agreements and Orders. Source: Contracting Officer</p>
01.A.02	23	Award/Modification/AmendmentNumber	Modification Number	Yes, if applicable	No, CO input	Agency Award Documentation ¹	<p>FPDS-NG Data Element Dictionary: Derivation: None Definition: An identifier issued by an agency that uniquely identifies one modification for one contract, agreement, order, etc. Instruction: When reporting modifications to contracts, agreements, or orders, report the modification number assigned by the reporting contracting office. For any given PID, all Modification Numbers must be unique. Source: Contracting Officer</p>
01.B.03	24	ParentAwardId	Referenced DV ID - Procurement Instrument Identifier	Yes, if applicable	No, CO input	Agency Award Documentation ¹	<p>FPDS-NG Government User's Manual (4.1.2.6): This data element is required for all Delivery/Task orders and BPA calls. It is not required for a Definitive Contract Action (DCA), Purchase Orders and a Modification. It's the contract or agreement number of the DV against which the order is placed. FPDS-NG Data Element Dictionary: Derivation: None Definition: When reporting orders under indefinite Delivery Vehicles (DV) such as a GWAC, DC, FSS, BOA, or BPA, report the Procurement Instrument Identifier (Contract Number or Agreement Number) of the DV. For the initial load of a BPA under a FSS, this is the FSS contract number. Note: BOAs and BPAs are with industry and not with other Federal Agencies. Instruction: Report the Contract or Agreement Number of the DV against which the order is placed. When reporting the initial load of a BPA under a FSS, report the FSS contract number. Source: Contracting Officer</p>
02.A.01	11(A)	FederalActionObligation	Action Obligation	Yes	No, CO input	Agency Award Documentation ¹	<p>FPDS-NG Data Element Dictionary: Derivation: None Definition: The amount that is obligated or de-obligated by this transaction. Instruction: Enter the net amount of funds (in dollars and cents) obligated or de-obligated by this transaction. If the net amount is zero, enter zero. If the net amount is a de-obligation, enter a minus sign in addition to the net amount. Source: CO</p>
02.B.02	14(A)	CurrentTotalValueOfAward	Total Base and Exercised Options Value	Yes	No, CO input	Agency Award Documentation ¹	<p>FPDS-NG Data Element Dictionary: Derivation: None Definition: This is a system generated element providing the sum of all the amounts entered in the "Base and Exercised Options Value" field for a particular PID and Agency. Example: Contract has 9 Modifications under "Transaction Number" as "1" and 9 modifications with the same PID under "Transaction Number" as "2". The base contracts and all the modifications have "Base and Exercised Options Value" as \$10 each. The value for the field "Total Base and Exercised Options Value" when the either of the bases or the modification is retrieved through atom feeds will be \$200 (\$100 under Transaction Number 1 + \$100 under Transaction Number 2). "Total Base and Exercised Options Value" is generated irrespective of the "Transaction Number" on the Awards. Instruction: This element is only available in Atom feeds</p>
02.C.02	15	PotentialTotalValueOfAward	Total Base and All Options Value (Total Contract Value)	Yes	Yes, FPDS	Agency Award Documentation ¹	<p>FPDS-NG Data Element Dictionary: Derivation: None Definition: This is a system generated element providing the sum of all the amounts entered in the "Base and All Options Value" field for a particular PID and Agency. Example: Contract has 9 Modifications under "Transaction Number" as "1" and 9 modifications with the same PID under "Transaction Number" as "2". The base contracts and all the modifications have "Base and All Options Value" as \$10 each. The value for the field "Total Base and All Options Value" when the either of the bases or the modification is retrieved through atom feeds will be \$200 (\$100 under Transaction Number 1 + \$100 under Transaction Number 2). "Total Base and All Options Value" is generated irrespective of the "Transaction Number" on the Awards. Instruction: This element is only available in Atom feeds</p>
03.A	25	ActionDate	Date Signed	Yes	No, CO input	Agency Award Documentation ¹	<p>FPDS-NG Data Element Dictionary: Derivation: None Definition: The date that a mutually binding agreement was reached. The date signed by the Contracting Officer or the Contractor, whichever is later. Instruction: Enter the date that the transaction was signed. For a bilateral transaction, this is the later of the date signed by the Contractor or the Contracting Officer. For a unilateral transaction, this is the date signed by the Contracting Officer. Source: Contracting Officer</p>
03.B.01	26	PeriodOfPerformanceStartDate	Effective Date	Yes	No, CO input	Agency Award Documentation ¹	<p>FPDS-NG Data Element Dictionary: Derivation: None Definition: The date that the parties agree will be the starting date for the contract's requirements. The Effective Date cannot be earlier than the Signed Date on the base document. Instruction: Enter the effective date agreed to by the parties. Source: Contracting Officer</p>
03.B.02	27	PeriodOfPerformanceCurrentEndDate	Completion Date	Yes	No, CO input	Agency Award Documentation ¹	<p>FPDS-NG Data Element Dictionary: Derivation: None Definition: The completion date of the base contract plus options that have been exercised. Instruction: Report the contract completion date based on the schedule in the contract. For an initial award, report the scheduled completion date for the base contract and for any options exercised at time of award. For modifications that exercise options, report the revised scheduled completion date for the base contract including exercised options. Source: Contracting Officer</p>
03.B.03	28	PeriodOfPerformancePotentialEndDate	Est. Ultimate Completion Date	Yes	No, CO input	Agency Award Documentation ¹	<p>FPDS-NG Data Element Dictionary: Derivation: Default to Current Completion Date if left blank. Definition: The estimated or scheduled completion date including the base contract or order and all options (if any) whether the options have been exercised or not. Instruction: Enter the mutually agreed upon contract completion date for the entire contract or order including all options or other modifications. For a delivery order, this refers to the delivery order completion only, not the referenced indefinite delivery vehicle. Source: Contracting Officer</p>

APPENDIX 6: TECHNICAL STATISTICAL SAMPLING TECHNIQUE

I. Introduction

The American Institute for Certified Public Accountants (AICPA) defines statistical sampling as: “An approach to sampling that has the following characteristics:

- a. Random selection of the sample items
- b. The use of an appropriate statistical technique to evaluate sample results, including measurement of sampling risk.

A sampling approach that does not have characteristics a and b is considered nonstatistical sampling.”³⁵

The DATA Act specifies the use of a statistically valid sample of spending data submitted under the Act and requires IGs to report the completeness, timeliness, quality, and accuracy of the data sampled. Unless the IG is doing a census review of 100% of the agency data submissions, a probability selection method must be used and the results must be projected to the population with the sampling error disclosed. In AICPA terminology, the method that is used for this type of audit is referred to as “attributes sampling”³⁶.

A census, where the IG tests each and every row in the population frame, is consistent with the definition of a statistical sample. Each sample unit has a probability of selection equal to 1, the sampling fraction is 1, and there is no sampling error. Reporting the results as a percentage is methodologically equivalent to projecting to the population. If a census is not feasible because of resources and/or the agency’s File C is too large to test all of them then a statistical sample should be drawn.

II. Sample Design

If the prior audit steps have determined that File C is suitable as the population frame, then it should be used for sampling. If the determination is made that File C is not suitable then Files D1 and D2 should be used as the population sample frame.

³⁵ Source: AICPA Audit Guide - Audit Sampling, May 2017, page 161

³⁶ Source: AICPA Audit Guide – Audit Sampling, May 2017, page 25, section 2.35. “2.35 Attributes sampling is used to reach a conclusion about a population in terms of a rate of occurrence. Its most common use in auditing is to test the rate of deviation from a prescribed control to support the auditor's assessed level of control risk. In attributes sampling, each occurrence of, or deviation from a prescribed control, is given equal weight in the sample evaluation, regardless of the dollar amount of the transactions. For testing the operating effectiveness of controls that are expected to operate with the same level of consistency, regardless of the size of transactions, attributes sampling is typically the most effective method for applying audit sampling to these tests.”

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The sampling unit is one row in the data file (a record). The data elements in sample selections are to be evaluated for completeness, timeliness, and accuracy. While the data rows in the population file come from federal spending data, including awards (e.g., procurements/contracts, grants, and loans), this is not a financial audit. The purpose of the sample is to assess the completeness, timeliness, and accuracy of the data submitted, which includes the 57 data elements. Statistical sampling should be done with equal probability of selection, either as a simple random selection or within each sampling stratum if the IG chooses to stratify. Sampling via probability proportionate to size is not recommended for the estimation of attribute measures, the controls on data quality we are assessing are supposed to apply equally to all data rows in the population.

There are 57 data elements that the statistical sample is supposed to assess.³⁷ The sample unit is a row of data (a record); each selected data row (record) will have a subset of the full 57 data elements present. Within File C an individual data row could derive from an award (e.g., procurement, grant, or loan) record. Because some sample selections could be from contracts while others could be from grants or loans, the subset of the 57 data elements which are actually present and applicable to a sampled data row will vary. We will return to how to handle this in section IV with the discussion about stratification versus simple random selection.

For completeness in an individual data element, in a sampled data record, the outcome measure is defined as:

$X_{(c,i)} = 1$ (a data value is present)

$X_{(c,i)} = 0$ (no data value is present or the data value present is not formatted correctly)

$X_{(c,i)} = N/A$ (not applicable, this data element is not required in the record type)

Where $i = 1$ to 57, one completeness measure for each data element.

For accuracy in an individual data element, in a sampled data record, the outcome measure is defined as:

$X_{(a,i)} = 1$ (data element is accurate)

$X_{(a,i)} = 0$ (data element is not accurate)

$X_{(a,i)} = N/A$ (not applicable, this data element is not required in the record type)

Where $i = 1$ to 57, one accuracy measure for each data element.

For timeliness in an individual data element, in a sampled data record, the outcome measure is defined as:

$X_{(t,i)} = 1$ (data element was reported timely)

$X_{(t,i)} = 0$ (data element was not reported timely)

$X_{(t,i)} = N/A$ (not applicable, this data element is not required in the record type)

Where $i = 1$ to 57, one timeliness measure for each data element.

³⁷ <https://fedspendingtransparency.github.io/data-elements/>

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III. Data record level measures for completeness, accuracy, and timeliness

In terms of assessing completeness, accuracy, and timeliness at the data record level, there are several different ways to aggregate the results of the attribute measures across the data elements present in the record. We can think of our sample as a matrix, where each selected data row (record) from file C (or D1/D2) is a row in the matrix and the columns are the measures for the completeness, accuracy, and timeliness of the 57 data elements. The outcome measures defined previously cover the measurement and estimation for the columns in our matrix. The next step is to define the outcomes so that we measure completeness, accuracy, and timeliness at the record (sample unit) level. This will involve aggregating across the various columns within each of the three main dimensions (completeness, accuracy, and timeliness). Below is an example for accuracy. You would have a similar matrix for completeness and one for timeliness.

An Example for Accuracy

Sample	Data Element 1	Data Element 2	Data Element 3	...	Data Element 57
data record 1	1	1	1		1
data record 2	0	1	1		1
data record 3	1	0	0		1
.					
.					
.					
.					
data record 385	1	1	1		N/A

A variety of ways exist for how to aggregate the findings from the individual data element tests to record summary level measures of completeness, accuracy, and timeliness. For consistency, IGs should create a data record level percentage measure as described below.

For a given dimension (e.g., completeness, accuracy, and timeliness), sum the indicator measures for the subset of the 57 data elements which are applicable for the data record. For example, if 40 data elements apply to the data record³⁸, then the sum of the accuracy attribute measures for this data record will be a number between 0 and 40. Once we have our sum, divide by the number of applicable data elements and multiply by 100. This rescales the measure from a number that ranges from 0 to 40 to a percentage which ranges

³⁸ This number will vary depending upon whether the data record comes from a procurement, including the type of procurement, a grant or a loan.

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in value from 0 to 100. This is the percentage of data elements which are accurate in the data record.

Rescaling and converting the record level measure to a percentage that ranges in value from 0 to 100 allows results to be combined across sample selections from different record types. After rescaling, everything is on a common scale of measurement.

Example: We have a data record in our sample where accuracy was assessed for 48 data elements.

Step 1: Determine the sum – this is the number of accurate data elements among the 48.

$$A = \sum_{i=1}^{48} X_{a,i}$$

Step 2: Rescale A to a measure of percentage accurate.

$$\bar{A} = \frac{A}{48} \times 100$$

This type of outcome measure is intuitive in that it represents the percent of the applicable data fields which met the accuracy data reliability test.

Estimates for this type of measure should be determined by calculating the average percentage for accuracy for the sample, then project them to the population. You would repeat all these steps for completeness and timeliness.

IV. Design Choices – to Stratify or Use Simple Random Selection

The File C data which IGs end up with to evaluate will vary in record composition across the government from one agency to another. Some agency population frames will be composed of grants and loans while others may be composed entirely of procurements. Most will be a mix of grants, loans, and procurements. For this reason it is not necessary for each and every IG in the government to use the exact same sample design.

The estimates will be statistically comparable across the IG community as long as a) the random selection is done via equal probability of selection; and b) CIGIE/FAEC has agreed upon common outcome measures to use.

There are a few steps to consider which should help audit teams decide what type of sample design is most appropriate for their size of agency.

- If you are an IG for a small agency and your agency has a small enough number of data rows in the File C submission that a census is feasible, then use a census and evaluate the file in its entirety. Use the outcome measures which CIGIE/FAEC agrees upon for measuring completeness, accuracy, timeliness, and quality.
- If you are an IG from a small or medium sized agency, you have an agency data file which is too large for a census to be feasible, but there is no in-house specialist staff group in your IG to help with the statistics, then a simple random sample is a

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valid choice for the sample design. Use the outcome measures which CIGIE FAEC agrees upon for measuring completeness, accuracy, timeliness, and quality.

- If you are from an IG for a large agency and you have an in-house specialist support group then stratification by record type is worth considering. Sample size allocation for each stratum should be done so that estimation for an attribute measure can be made with some larger margin of error sample while the overall margin of error is set using the agreed upon sample size determination methodology.³⁹ The added value that stratification provides is the ability to detect differences between data record types (e.g., procurements, grants, and loans) and thus target audit findings and related recommendations accordingly. For example, testing of the sample selections may reveal that your agency has problems in accuracy with procurements, but not grants or loans. Or it may reveal that the problems are agency wide and not confined to one type of record. Use the outcome measures which CIGIE/FAEC agrees upon for measuring completeness, accuracy, timeliness, and quality.
 - For agencies with a skewed distribution, such as one where the majority are of one record type while a small percentage are other record types, it is okay to target most of the sample size allocation to the record type with the disproportionate representation in the population and apply a small sample allocation to the other stratum (or strata) for purposes of audit coverage.⁴⁰ It would also be okay with a File C that is predominantly of one record type to select a simple random sample and live with the consequence that the results for a subset of data elements would not be projectable.⁴¹

³⁹ For example, in the 2017 GAO report on the DATA Act (GAO-18-138) the stratification was designed to produce stratum-level estimates with a margin of error no larger than plus or minus 10 percentage points at the 95% level of confidence and an overall margin of error no larger than plus or minus 7 percentage points at the 95% level of confidence

⁴⁰ If the allocation of sample units to the “small” stratum (or strata) is not large enough to support statistically reliable estimates, report out counts for the data elements which are unique to the record type which comprises a small share of the total agency C file. As long as statistical projections are made for the other data elements, including the ones common to both record types, this is methodologically sound. For attribute variables in classic variable sampling, we consider a margin of error less than or equal to plus or minus 15 percentage points at the 95% level of confidence to be of sufficient reliability to report out on.

⁴¹ In this situation, report out counts for the data elements which are specific to the record type which comprises a small share of the total agency C file if they do not turn up in the sample in a number sufficient to support statistically reliable population estimates. As long as statistical projections are made for the other data elements, including the ones common to both record types, this is methodologically sound. For attribute variables in classic variable sampling, we consider a margin of error less than or equal to plus or minus 15 percentage points at the 95% level of confidence to be of sufficient reliability to report out on.

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IGs may consider stratification by other variables, such as sub-agencies. When stratification by something other than record type is done the methodological rationale for doing so should be provided in the appendix of the report. We do not recommend using stratification by dollar value for this particular audit because Treasury and OMB have not determined reporting materiality amounts for data displayed on USASpending.gov.

Appendix 8
 Example Listing of Standardized Data Elements for Reporting

APPENDIX 8: LISTING OF STANDARDIZED DATA ELEMENTS FOR REPORTING

Table X: <Agency>'s results for the Data Elements

<Agency>'s results listed in descending order by accuracy error rate percentage.

Accuracy (A), Completeness (C), Timeliness (T)				
		Error Rate ⁴²		
Data Element No.	Data Element Name	A	C	T
1	Awardee/Recipient Legal Entity Name			
2	Awardee/Recipient Unique Identifier			
3	Ultimate Parent Unique Identifier			
4	Ultimate Parent Legal Entity Name			
5	Legal Entity Address			
6	Legal Entity Congressional District			
7	Legal Entity Country Code			
8	Legal Entity Country Name			
11	Federal Action Obligation			
12	Non-Federal Funding Amount			
13	Amount of Award			
14	Current Total Value of Award			

⁴² All estimates from the sample have a margin of error no greater than plus or minus 5 percentage points unless otherwise noted.

Appendix 8
 Example Listing of Standardized Data Elements for Reporting

15	Potential Total Value of Award			
16	Award Type			
17	NAICS Code			
18	NAICS Description			
19	Catalog of Federal Domestic Assistance (CFDA) Number			
20	Catalog of Federal Domestic Assistance (CFDA) Title			
22	Award Description			
23	Award Modification / Amendment Number			
24	Parent Award ID Number			
25	Action Date			
26	Period of Performance Start Date			
27	Period of Performance Current End Date			
28	Period of Performance Potential End Date			
29	Ordering Period End Date			
30	Primary Place of Performance Address			
31	Primary Place of Performance Congressional District			
32	Primary Place of Performance Country Code			
33	Primary Place of Performance Country Name			
34	Award ID Number (PIID/FAIN)			
35	Record Type			
36	Action Type			
37	Business Types			
38	Funding Agency Name			

Appendix 8

Example Listing of Standardized Data Elements for Reporting

39	Funding Agency Code			
40	Funding Sub Tier Agency Name			
41	Funding Sub Tier Agency Code			
42	Funding Office Name			
43	Funding Office Code			
44	Awarding Agency Name			
45	Awarding Agency Code			
46	Awarding Sub Tier Agency Name			
47	Awarding Sub Tier Agency Code			
48	Awarding Office Name			
49	Awarding Office Code			
50	Object Class			
51	Appropriations Account			
53	Obligation			
54	Unobligated Balance			
56	Program Activity			
57	Outlay			

APPENDIX 9: MAJOR CONTRIBUTORS

Brett Baker, Nuclear Regulatory Commission, Office of Inspector General
Bobbie Jean Bartz, Department of Justice, Office of the Inspector General
Pauletta Battle, Department of the Treasury, Office of Inspector General
Elsa Beyene, Department of Justice, Office of Inspector General
Corey Bidne, U.S. Department of Agriculture, Office of Inspector General
Ruth Blevins, Department of Homeland Security, Office of Inspector General
Gail Butler, Nuclear Regulatory Agency, Office of Inspector General
Andrew Delk, Office of Personnel Management, Office of Inspector General (formerly)
Phillip Faller, Department of Defense, Office of Inspector General
Jeffrey Funk, General Services Administration, Office of Inspector General
Artrice Hardin, Department of Defense, Office of Inspector General
Deborah Harker, Department of the Treasury, Office of Inspector General
Tabitha (Tammy) Hart, Department of Justice, Office of the Inspector General
Susanne Heimbach, Securities and Exchange Commission, Office of Inspector General
Kanika Kals, Treasury Inspector General for Tax Administration, Office of Inspector General
Selvavel Kandasamy, Department of Defense, Office of Inspector General
Michael Klausmeier, Social Security Administration, Office of Inspector General
Paige Krivda, Treasury Inspector General for Tax Administration, Office of Inspector General
Kathryn Lam, Department of Justice, Office of the Inspector General
Ashley Lane, Department of Defense, Office of Inspector General
Morgan Little, Treasury Inspector General for Tax Administration, Office of Inspector General
Jeneba Moiwo, Department of the Treasury, Office of Inspector General
Beverly O'Neill, Department of State, Office of Inspector General
Benjamin Patterson, National Aeronautics and Space Administration, Office of Inspector
General
Shellie Purnell-Brown, Federal Elections Commission, Office of Inspector General
David Reynolds, Department of Interior, Office of Inspector General
Tom Seluzicki, Veterans Affairs, Office of Inspector General
Barbara Silber, Department of Justice, Office of Inspector General
Andrea Smith, Department of the Treasury, Office of Inspector General
Abraham Smith, Department of Defense, Office of Inspector General
John Tomasetti, Department of the Treasury, Office of Inspector General
Rhonda Turnbow, United States International Trade Commission, Office of the Inspector
General
Rong Wang, Department of State, Office of Inspector General
Joy Wright, General Services Administration, Office of Inspector General